## Illinois

## Grade 4 and 8 Public Schools State Science 2015

This report provides selected results for Illinois' public school students at grades 4 and 8 from the National Assessment of Educational Progress (NAEP) assessment in science. Results are reported by average scale scores and by achievement levels (*Basic, Proficient,* and *Advanced*).

Forty-six states and the Department of Defense Education Activity schools (DoDEA) participated in the 2015 science assessment at grades 4 and 8.

For more information about the assessment, visit the NAEP website at <a href="http://nces.ed.gov/nationsreportcard/">http://nces.ed.gov/nationsreportcard/</a> which contains

- The Nation's Report Card™, Science 2015
- The full set of national and state results in an interactive database
- Released test questions, scoring guides, and question-level performance data

NAEP is a project of the National Center for Education Statistics (NCES), reporting on the academic achievement of elementary and secondary students in the United States.

#### **KEY FINDINGS FOR 2015**

#### Grade 4:

- In 2015, the average science score for fourth-grade students in Illinois was 151. This was not significantly different from that for the nation's public schools (153).
- The average score for students in Illinois in 2015 (151) was higher than that in 2009 (148).
- In 2015, the percentage of students in Illinois who performed at or above *Proficient* was 35 percent. This was not significantly different from that for the nation's public schools (37 percent).
- The percentage of students in Illinois who performed at or above *Proficient* in 2015 (35 percent) was not significantly different from that in 2009 (32 percent).
- In 2015, the percentage of students in Illinois who performed at or above *Basic* was 73 percent. This was not significantly different from that for the nation's public schools (75 percent).
- The percentage of students in Illinois who performed at or above *Basic* in 2015 (73 percent) was not significantly different from that in 2009 (69 percent).

#### Grade 8:

- In 2015, the average science score for eighth-grade students in Illinois was 150. This was lower than that for the nation's public schools (153).
- The average score for students in Illinois in 2015 (150) was not significantly different from that in 2009 (148) and was not significantly different from that in 2011 (147).
- In 2015, the percentage of students in Illinois who performed at or above *Proficient* was 28 percent. This was smaller than that for the nation's public schools (33 percent).
- The percentage of students in Illinois who performed at or above *Proficient* in 2015 (28 percent) was not significantly different from that in 2009 (28 percent) and in 2011 (26 percent).
- In 2015, the percentage of students in Illinois who performed at or above *Basic* was 63 percent. This was smaller than that for the nation's public schools (67 percent).
- The percentage of students in Illinois who performed at or above *Basic* in 2015 (63 percent) was not significantly different from that in 2009 (61 percent) and in 2011 (60 percent).

The U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, and National Assessment of Educational Progress (NAEP) have provided software that generated user-selectable data, statistical significance test result statements, and technical descriptions of the NAEP assessments for this report. Content may be added or edited by states or other jurisdictions. This document, therefore, is not an official publication of the National Center for Education Statistics.

## Introduction

#### What Was Assessed?

The content for each NAEP assessment is determined by the National Assessment Governing Board. The framework for each assessment documents the content and process areas to be measured and sets guidelines for the types of questions to be used. The development process for the science framework required the active participation of teachers, curriculum specialists, subject-matter specialists, local school administrators, parents, and other members of the general public. The current framework is available at the Governing Board's website at <a href="https://www.nagb.org/content/nagb/assets/documents/publications/frameworks/science/2015-science-framework.pdf">https://www.nagb.org/content/nagb/assets/documents/publications/frameworks/science/2015-science-framework.pdf</a>.

The 2009 NAEP science framework approved by the Governing Board replaced the framework used for the 1996, 2000, and 2005 science assessments. A variety of factors made it necessary to create a new framework to guide the assessment of science in 2009 and beyond: the publication of *National Standards* for science literacy, advances in both science and cognitive research, the growth in national and international science assessments, advances in innovative assessment approaches, and the need to fairly assess the widest possible range of students. The framework is unchanged for 2015.

#### **Assessment Criteria**

Each question in the 2015 science assessment was classified based on two criteria: *science content* and *science practices*. By considering these two criteria for each question, the framework ensures that NAEP assesses an appropriate balance of content along with a variety of ways of knowing and doing science.

#### SCIENCE CONTENT

The science content for the 2015 NAEP is defined by a series of statements that describe key facts, concepts, principles, laws, and theories in three broad areas:

- physical science
- life science
- Earth and space sciences

Physical Science deals with matter, energy, and motion; life science with structures and functions of living systems and changes in living systems; and Earth and space sciences with Earth in space and time, Earth structures, and Earth systems.

#### **SCIENCE PRACTICES**

The second aspect of the framework is defined by four science practices, which focus on what students should know and be able to do in science:

- Identifying science principles
- Using science principles
- Using scientific inquiry
- Using technological design

#### **Assessment Design**

The assessment design allowed for broad coverage of the three science content areas and four science

#### NAEP 2015 Science Report for Illinois

practices, while minimizing the time burden for any one student. Each student in the assessment was asked to complete two 25-minute sections. Each section contained between 14 and 18 questions depending on the balance between multiple-choice and constructed-response questions. Released NAEP science questions, along with student performance data by state, are available on the NAEP website at <a href="http://nces.ed.gov/nationsreportcard/itmrlsx/">http://nces.ed.gov/nationsreportcard/itmrlsx/</a>.

#### Who Was Assessed?

Forty-six states and the Department of Defense Education Activity schools (DoDEA) participated in the 2015 science assessment at grades 4 and 8. The overall participation rates for schools and students must meet guidelines established by the National Center for Education Statistics (NCES) and the National Assessment Governing Board for assessment results to be reported publicly. A participation rate of at least 85 percent for schools was required. Participation rates for the 2015 science assessment are available on the NAEP website at <a href="http://www.nationsreportcard.gov/science\_2015/#science/about#participation">http://www.nationsreportcard.gov/science\_2015/#science/about#participation</a>.

The schools and students participating in NAEP assessments are selected to be representative both nationally and for public schools at the state level. The comparisons between national and state results in this report present the performance of public school students only. In NAEP reports, the category "nation (public)" does not include private, DoDEA, or Bureau of Indian Education schools.

## How Is Student Science Performance Reported?

The 2015 state results are compared to results from the nation at grades 4 and 8.

**Average Scores**: Student performance is reported as an average score based on the NAEP science scale, which ranges from 0 to 300. Because NAEP scales are developed independently for each subject and for each content area within a subject, the scores cannot be compared across subjects or across content areas within the same subject. Results are also reported at five percentiles (10th, 25th, 50th, 75th, and 90th) to show trends in performance for lower-, middle-, and higher-performing students.

**Achievement Levels:** Based on recommendations from policymakers, educators, and members of the general public, the Governing Board sets specific achievement levels for each subject area and grade. Achievement levels are performance standards indicating what students should know and be able to do. They provide another perspective with which to interpret student performance. NAEP results are reported in terms of three achievement levels—*Basic, Proficient*, and *Advanced*—and are expressed in terms of the percentage of students who attained each level. The three achievement levels are defined as follows:

- Basic denotes partial mastery of prerequisite knowledge and skills that are fundamental for proficient work at each grade.
- *Proficient* represents solid academic performance for each grade assessed. Students reaching this level have demonstrated competency over challenging subject matter, including subject-matter knowledge, application of such knowledge to real-world situations, and appropriate analytical skills.
- Advanced represents superior performance.

The achievement levels are cumulative; therefore, students performing at the *Proficient* level also display the competencies associated with the *Basic* level, and students at the *Advanced* level also demonstrate the competencies associated with both the *Basic* and the *Proficient* levels.

As provided by law, NCES, upon review of congressionally mandated evaluations of NAEP, has determined that achievement levels are to be used on a trial basis and should be interpreted with caution. The NAEP achievement levels have been widely used by national and state officials. The science achievement-level descriptions are summarized in [[Figure 1]].

**Figure** 1-A

## The Nation's Report Card 2015 State Assessment

Descriptions of fourth-grade achievement levels for 2015 NAEP science assessment

Basic Level (131)

Students performing at the Basic level should be able to describe, measure, and classify familiar objects in the world around them, as well as explain and make predictions about familiar processes. These processes include changes of states of matter, movements of objects, basic needs and life cycles of plants and animals, changes in shadows during the day, and changes in weather. They should be able to critique simple observational studies, communicating observations and basic measurements of familiar systems and processes, and look for patterns in their observations. With regard to scientific constraints, they should also be able to propose and critique alternative solutions to problems involving familiar systems and processes.

Science Practices: Students performing at the Basic level should be able to describe, measure, and classify familiar objects in the world around them, as well as explain and make predictions about familiar processes, using evidence to support their observations and conclusions. They should be able to critique simple observational studies, communicate observations and basic measurements of familiar systems and processes, and look for patterns in their observations. They should also be able to propose and recognize alternative solutions to problems involving familiar systems and processes.

In the physical sciences, students performing at the Basic level should be able to describe the properties of the states of matter, describe how to change matter from one state to another, describe different forms of energy, predict the electrical energy transfers that will take place in a simple circuit, critique alternative explanations for changes in a moving object's position, and design an investigation to show how exerting a force on an object changes the object's motion.

In the life sciences, students performing at the Basic level should be able to identify the stages in the life cycles of familiar organisms, describe how familiar animals meet their basic needs for food, air, water, and shelter, observe and describe the changes in plants and animals during their life cycles, and describe how environments meet the survival needs of familiar plants and animals.

In the Earth and space sciences, students performing at the Basic level should be able to predict changes in the length and position of shadows cast by the sun, describe how slow Earth processes (e.g., erosion) and fast Earth processes (e.g., volcanic eruption) can change Earth's surface, distinguish between natural and man-made materials, choose and use a tool to monitor how weather conditions change, and identify Earth resources that are limited.

Level (167)

**Proficient** Students performing at the *Proficient* level should be able to demonstrate relationships among closely related science concepts, as well as analyze alternative explanations or predictions. They should be able to explain how changes in temperature cause changes of state, how forces can change motion, how adaptations help plants and animals meet their basic needs, how environmental changes can affect their growth and survival, how land formations can result from Earth processes, and how recycling can help conserve limited resources. They should be able to identify patterns in data and/or explain these patterns. They should also be able to identify and critique alternative responses to design problems.

Science Practices: Students performing at the *Proficient* level should be able to demonstrate relationships among closely related science concepts and familiar phenomena around them, as well as analyze alternative explanations or predictions, using evidence to support their explanations and predictions, critique observational studies and simple investigations, identify patterns in data and/or explain those patterns in data, and apply scientific ideas to identify and critique alternative designs to problems that personally affect them.

In the physical sciences, students performing at the *Proficient* level should be able to demonstrate the

relationship between temperature change and changes in the physical properties of matter, explain how energy in one form can be changed into another form, design an investigation that measures how temperature changes when energy is added to a substance, propose a design for a container that will maintain the temperature of an object that is above or below room temperature, and measure changes in position of an object in motion as different forces are applied.

In the life sciences, students performing at the Proficient level should be able to describe needs of familiar plants and animals at different stages of their life cycles, explain adaptations of familiar plants and animals to their environments, predict effects of environmental changes on plant or animal growth and survival, and apply information about an animal's basic needs to propose a supportive environment.

In the Earth and space sciences, students performing at the Proficient level should be able to explain how the Sun's changing position in the sky during the day affects shadows, interpret land formations as resulting from either slow (e.g., erosion) or rapid (e.g., volcanic eruption) Earth processes, explain how natural materials can help sustain the lives of familiar plants and animals, identify how patterns of weather conditions change from season to season, and explain how the practices of recycling, reusing, and reducing help to conserve limited resources.

Level (224)

**Advanced** Students performing at the *Advanced* level should be able to demonstrate relationships among different representations of science principles, as well as propose alternative explanations or predictions of phenomena. They should be able to use numbers, drawings, and graphs to describe and explain motions of objects, analyze how environmental conditions affect growth and survival of plants and animals, describe changes in the Sun's path through the sky at different times of year, and describe how human uses of Earth materials affect the environment. They should be able to design studies that use sampling strategies to obtain evidence. They should also be able to propose and critique alternative individual and local community responses to design problems.

Science Practices: Students performing at the Advanced level should be able to demonstrate relationships among different representations of principles, as well as propose alternative explanations or predictions of familiar phenomena, using evidence to support their explanations and predictions, design observational studies or simple investigations to validate or criticize explanations or predictions and use sampling strategies to obtain evidence, and propose and critique alternative individual and local community responses to design problems.

**In the physical sciences**, students at the *Advanced* level should be able to demonstrate the relationship between the quantity of energy needed to change the state of a sample of a substance and the weight of the sample, demonstrate how different representations (i.e., verbal, numerical, graphical) can be used to show the motion of an object, suggest an example of how the motion of an object can be changed without touching it, and design an investigation that demonstrates how long it takes different forms of energy to change the temperature of matter.

In the life sciences, students at the Advanced level should be able to evaluate relationships between changing environmental conditions and organisms' growth, survival, and reproduction, analyze environments for how they may have different effects on the growth and survival of plants or animals of the same kind, and investigate the relationship between light and plant growth.

In the Earth and space sciences, students at the Advanced level should be able to relate changes in the Sun's daily path through the sky to different times of year, suggest examples of Earth materials that can be modified to meet human needs, explain how erosion is caused by daily/seasonal weather events, propose methods of reducing the amount of erosion, describe how humans can change environments that can be either detrimental or beneficial for themselves and other organisms, and describe how the use of Earth materials by humans impacts the environment.

#### NAEP 2015 Science Report for Illinois

SOURCE: National Assessment Governing Board. (2014). Science Framework for the 2015 National Assessment of Educational Progress. Washington, DC.	

**Figure** 1-B

## The Nation's Report Card 2015 State Assessment

Descriptions of eighth-grade achievement levels for 2015 NAEP science assessment

Basic Level (141)

Students performing at the Basic level should be able to state or recognize correct science principles. They should be able to explain and predict observations of natural phenomena at multiple scales, from microscopic to global. They should be able to describe properties and common physical and chemical changes in materials, describe changes in potential and kinetic energy of moving objects, describe levels of organization of living systems—cells, multicellular organisms, and ecosystems, identify related organisms based on hereditary traits, describe a model of the solar system, and describe the processes of the water cycle. They should be able to design observational and experimental investigations employing appropriate tools for measuring variables. They should be able to propose and critique the scientific validity of alternative individual and local community responses to design problems.

Science Practices: Students performing at the Basic level should be able to state or recognize correct science principles, explain and predict observations of natural phenomena at multiple scales, from microscopic to global, using evidence to support their explanations and predictions, design investigations employing appropriate tools for measuring variables, and propose and critique the scientific validity of alternative individual and local community responses to design problems.

In the physical sciences, students at the Basic level should be able to recognize a class of chemical compounds by its properties, design an investigation to show changes in properties of reactants and products in a chemical process such as burning or rusting, describe the changes in kinetic and potential energy of an object such as a swinging pendulum, describe and compare the motions of two objects moving at different speeds from a table of their position and time data, describe the direction of all forces acting on an object, and suggest an example of a system in which forces are acting on an object but the motion of the object does not change.

In the life sciences, students at the Basic level should be able to identify levels of organization within cells, multicellular organisms, and ecosystems, describe how changes in an environment relate to an organism's survival, describe types of interdependence in ecosystems, identify related organisms based on hereditary traits, discuss the needs of animals and plants to support growth and metabolism, and analyze and display data showing simple patterns in population growth.

In the Earth and space sciences, students at the Basic level should be able to describe a Sun-centered model of the solar system that illustrates how gravity keeps the objects in regular motion, describe how fossils and rock formations can be used as evidence to infer events in Earth's history, relate major geologic events, such as earthquakes, volcanoes, and mountain building to the movement of lithospheric plates, use weather data to identify major weather events, and describe the processes of the water cycle including changes in the physical state of water.

Level (170)

**Proficient** Students performing at the *Proficient* level should be able to demonstrate relationships among closely related science principles. They should be able to identify evidence of chemical changes, explain and predict motions of objects using position-time graphs, explain metabolism, growth, and reproduction in cells, organisms, and ecosystems, use observations of the Sun, Earth, and Moon to explain visible motions in the sky, and predict surface and groundwater movements in different regions of the world. They should be able to explain and predict observations of phenomena at multiple scales, from microscopic to macroscopic and local to global, and to suggest examples of observations that illustrate a science principle. They should be able to use evidence from investigations in arguments that accept, revise, or reject scientific models. They should be able to use scientific criteria to propose and critique alternative individual and local community responses to design problems.

Science Practices: Students performing at the *Proficient* level should be able to demonstrate relationships among closely related science principles, explain and predict observations of phenomena at multiple scales, from microscopic to macroscopic and local to global, and suggest examples of observations that illustrate a science principle, design investigations requiring control of variables to test a simple model, employing appropriate sampling techniques and data quality review processes, and use the evidence to communicate an argument that accepts, revises, or rejects the model, and propose and critique solutions and predict the scientific validity of alternative individual and local community responses to design problems.

In the physical sciences, students at the *Proficient* level should be able to demonstrate the relationship between the properties of chemical elements and their position on the periodic table, use empirical evidence to demonstrate that a chemical change has occurred, demonstrate the relationship of the motion of an object that experiences multiple forces with the representation of the motion on a position-time graph, predict the position of a moving object based on the position-time data presented in a table, and suggest examples of systems in which potential energy is converted into other forms of energy.

In the life sciences, students at the *Proficient* level should be able to explain metabolism, growth, and reproduction at multiple levels of living systems: cells, multicellular organisms, and ecosystems, predict the effects of heredity and environment on an organism's characteristics and survival, use sampling strategies to estimate population sizes in ecosystems, and suggest examples of sustainable systems for multiple organisms.

In the Earth and space sciences, students at the *Proficient* level should be able to explain how gravity accounts for the visible patterns of motion of the Earth, Sun, and Moon, explain how fossils and rock formations are used for relative dating, use models of Earth's interior to explain lithospheric plate movement, explain the formation of Earth's materials using the properties of rocks and soils, identify recurring patterns of weather phenomena, and predict surface and groundwater movement in different regions of the world.

Level (215)

**Advanced** Students performing at the *Advanced* level should be able to develop alternative representations of science principles and explanations of observations. They should be able to use information from the periodic table to compare families of elements, explain changes of state in terms of energy flow, trace matter and energy through living systems at multiple scales, predict changes in populations through natural selection and reproduction, use lithospheric plate movement to explain geological phenomena, and identify relationships among regional weather and atmospheric and ocean circulation patterns. They should be able to design and critique investigations involving sampling processes, data quality review processes, and control of variables. They should be able to propose and critique alternative solutions that reflect science-based trade-offs for addressing local and regional problems.

Science Practices: Students performing at the Advanced level should be able to demonstrate relationships among different representations of science principles. They should be able to explain and predict observations of phenomena at multiple scales, from microscopic to macroscopic and local to global, and develop alternative explanations of observations, using evidence to support their thinking. They should be able to design control of variable investigations employing appropriate sampling techniques and data quality review processes that strengthen the evidence used to argue for one alternate model over another. They should be able to propose and critique alternative solutions that reflect science-based trade-offs for addressing local and regional problems.

In the physical sciences, students at the Advanced level should be able to interpret diagrams, graphs, and data to demonstrate the relationship between the particulate nature of matter and state changes (for instance, melting and freezing), demonstrate relationships between position on the periodic table and the characteristics of families of the chemical elements, explain changes of state in terms of energy flow in and out of a system, identify possible scientific trade-offs in making decisions on the design of an electrical energy power plant, suggest examples of systems in which objects are undergoing transitional, vibrational, and rotational motion, and suggest examples of systems in which forces are acting both through contact and at a distance.

#### NAEP 2015 Science Report for Illinois

**In the life sciences**, students at the *Advanced* level should be able to explain movement and transformations of matter and energy in living systems at cellular, organismal, and ecosystem levels, predict changes in populations through natural selection and reproduction, and describe an ecosystem's populations and propose an analysis for changes based on energy flow through the system.

In the Earth and space sciences, students at the *Advanced* level should be able to explain the seasons, Moon phases, and lunar and solar eclipses, illustrate how fossils and rock formations can provide evidence of changes in environmental conditions over time, use lithospheric plate movement to explain geological phenomena, identify relationships among regional weather and atmospheric and ocean circulation patterns, and use the water cycle to propose and critique ways for obtaining drinkable water.

NOTE: The scores in parentheses in the shaded boxes indicate the lowest point on the 0–300 scale at which the achievement-level range begins. SOURCE: National Assessment Governing Board. (2014). Science Framework for the 2015 National Assessment of Educational Progress. Washington, DC.

## Assessing Students With Disabilities and/or English Language Learners

Testing accommodations, such as extra testing time or individual (rather than group) administration, are provided for students with disabilities (SD) and English language learners (ELL) who could not fairly and accurately demonstrate their abilities without modified test administration procedures. However, even with the availability of accommodations, some students may still be excluded from the NAEP assessment. Due to differences in policies and practices regarding the identification and inclusion of SD and ELL students, variations in exclusion and accommodation rates should be considered when comparing students' performance across states. The types of accommodations used in the 2015 NAEP science assessment are available on the NAEP website at http://www.nationsreportcard.gov/science\_2015/#science/about#inclusion.

## **Interpreting Results**

The scores and percentages in this report are estimates based on samples of students rather than on entire populations. In addition, the collection of questions used is only a sample of the many questions that could have been asked to assess the skills and abilities described in the NAEP framework. Comparisons between groups are based on statistical tests that consider both the size of the differences and the standard errors of the two statistics being compared. Standard errors are margins of error, and estimates based on smaller groups are likely to have larger margins of error. The size of the standard errors may also be influenced by other factors such as how representative the assessed students are of the entire population. Statistical tests that factor in these standard errors are used to determine whether the differences between average scores or percentages are significant. All differences were tested for statistical significance at the .05 level using unrounded numbers.

Differences between scores or between percentages are discussed in this report only when they are significant from a statistical perspective. Significant differences are marked with a notation (\*) in the tables. Any differences in scores that are mentioned in the text as "higher," "lower," "greater," or "smaller" are statistically significant.

Score or percentage differences or gaps cited in this report are calculated based on differences between unrounded numbers. Therefore, the reader may find that the score or percentage difference cited in the text or tables may not be identical to the difference obtained from subtracting the rounded values shown in the accompanying tables or figures.

The reader is cautioned against making simple causal inferences between student performance and the other variables (e.g., race/ethnicity, gender, and type of school location) discussed in this report. A statistically significant relationship between a variable and measures of student performance does not imply that the variable causes differences in how well students perform. The relationship may be influenced by a number of other variables not accounted for in this report, such as family income, parental involvement, or student attitudes.

## NAEP 2015 Science Overall Average Score and Achievement-Level Results for Public School Students

Overall science results for public school students from Illinois are reported in this section, as well as regional and national results. The regions defined by the U.S. Census Bureau are Northeast, South, Midwest, and West (http://nces.ed.gov/nationsreportcard/hsts/tabulations/regions.asp).

### **Overall Average Score Results**

Student performance is reported as an average score based on the NAEP science scale, which ranges from 0 to 300.

Tables 1-A and 1-B show the overall performance results of grades 4 and 8 public school students in Illinois, the nation (public), and the region in which the jurisdiction is located. The first column of results presents the average score on the NAEP science scale. The remaining columns show the scores at selected percentiles. A percentile is a score point at or below which a certain percentage of students fall. For example, the 25th percentile demarks the cut point for the lowest 25 percent of students within the distribution of scale scores.

#### Grade 4 Scale Score Results

- In 2015, the average scale score for students in Illinois was 151. This was not significantly different from that for students across the nation (153).
- In Illinois, the average scale score for students in 2015 was higher than that in 2009 (148). Similarly, the average scale score for students in public schools across the nation in 2015 was higher than that in 2009 (149).

#### Grade 8 Scale Score Results

- In 2015, the average scale score for students in Illinois was 150. This was lower than that for students across the nation (153).
- In Illinois, the average scale score for students in 2015 was not significantly different from that in 2011 (147). However, the average scale score for students in public schools across the nation in 2015 was higher than that in 2011 (151).
- In Illinois, the average scale score for students in 2015 was not significantly different from the scores in 2009 and 2011.

## Table 1-A

## The Nation's Report Card 2015 State Assessment

Average scale scores and selected percentile scores in NAEP science for fourth-grade public school students, by year and jurisdiction: 2009 and 2015

Year and jurisdiction		Average scale score	10th percentile	25th percentile	50th percentile	75th percentile	90th percentile
2009	Nation (public)	149*	102*	126*	152*	174*	192*
	Midwest <sup>1</sup>	154*	108*	133*	157*	178	195
	Illinois	148*	98	123*	150	174	193
2015	Nation (public)	153	107	131	156	177	195
	Midwest <sup>1</sup>	156	111	135	159	179	195
	Illinois	151	104	129	154	176	194

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction in 2015.

<sup>&</sup>lt;sup>1</sup> Region in which jurisdiction is located.

NOTE: The NAEP grade 4 science scale ranges from 0 to 300. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2015 Science Assessments.

**Table** 1-B

## The Nation's Report Card 2015 State Assessment

Average scale scores and selected percentile scores in NAEP science for eighth-grade public school students, by year and jurisdiction: 2009, 2011, and 2015

Year and jurisdiction		Average scale score	10th percentile	25th percentile	50th percentile	75th percentile	90th percentile
2009	Nation (public)	149*	102*	127*	152*	174*	191*
	Midwest <sup>1</sup>	154*	109*	134*	158*	178*	194
	Illinois	148	100*	126	151	173	190
2011	Nation (public)	151*	105*	129*	154*	175*	192*
	Midwest <sup>1</sup>	155	113	136	158	178	194
	Illinois	147	103	126*	150	171	187
2015	Nation (public)	153	107	132	156	177	194
	Midwest <sup>1</sup>	156	113	136	159	179	195
	Illinois	150	107	129	152	173	189

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction in 2015.

 $<sup>^{1}</sup>$  Region in which jurisdiction is located.

NOTE: The NAEP grade 8 science scale ranges from 0 to 300. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, and 2015 Science Assessments.

#### Overall Achievement-Level Results

Student results are reported as the percentages of students performing relative to performance standards set by the National Assessment Governing Board. These performance standards for what students should know and be able to do were based on the recommendations of broadly representative panels of educators and members of the public.

Tables 2-A and 2-B show the percentage of students at grades 4 and 8 who performed below *Basic*, at or above *Basic*, at or above *Proficient*, and at *Advanced*. Because the percentages are cumulative from *Basic* to *Proficient* to *Advanced*, they will sum to more than 100 percent. Only the percentage of students performing at or above *Basic* (which includes the students at *Proficient* and *Advanced*) plus the students below *Basic* will sum to 100 percent.

#### Grade 4 Achievement-Level Results

- In 2015, the percentage of Illinois' students who performed at or above *Proficient* was 35 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Proficient* (37 percent).
- In Illinois, the percentage of students who performed at or above *Proficient* in 2015 was not significantly different from the percentage in 2009 (32 percent). However, the percentage of students who performed at or above *Proficient* in the nation in 2015 was greater than the percentage in 2009 (32 percent).
- In 2015, the percentage of Illinois' students who performed at or above *Basic* was 73 percent. This was not significantly different from the percentage of the nation's public school students who performed at or above *Basic* (75 percent).
- In Illinois, the percentage of students who performed at or above *Basic* in 2015 was not significantly different from the percentage in 2009 (69 percent). However, the percentage of students who performed at or above *Basic* in the nation in 2015 was greater than the percentage in 2009 (71 percent).

#### **Grade 8 Achievement-Level Results**

- In 2015, the percentage of Illinois' students who performed at or above *Proficient* was 28 percent. This was smaller than the percentage of the nation's public school students who performed at or above *Proficient* (33 percent).
- In Illinois, the percentage of students who performed at or above *Proficient* in 2015 was not significantly different from the percentages in 2009 and 2011.
- In 2015, the percentage of Illinois' students who performed at or above *Basic* was 63 percent. This was smaller than the percentage of the nation's public school students who performed at or above *Basic* (67 percent).
- In Illinois, the percentage of students who performed at or above *Basic* in 2015 was not significantly different from the percentages in 2009 and 2011.

Table 2-A

## The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students at or above NAEP science achievement levels, by year and jurisdiction: 2009 and 2015

Year and jurisdiction		Below <i>Basic</i>			
2009	Nation (public)	29*	71*	32*	1*
	Midwest <sup>1</sup>	24*	76*	38*	1
	Illinois	31	69	32	1
2015	Nation (public)	25	75	37	1
	Midwest <sup>1</sup>	21	79	39	1
	Illinois	27	73	35	1

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction in 2015.

<sup>&</sup>lt;sup>1</sup> Region in which jurisdiction is located.

NOTE: The NAEP grade 4 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 130 or lower; *Basic*, 131–166; *Proficient*, 167–223; and *Advanced*, 224 or above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2015 Science Assessments.

Table 2-B

## The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students at or above NAEP science achievement levels, by year and jurisdiction: 2009, 2011, and 2015

Year and jurisdiction		Below <i>Basic</i>		At or above <i>Proficient</i>	
2009	Nation (public)	38*	62*	29*	1*
	Midwest <sup>1</sup>	31*	69*	34*	2
	Illinois	39	61	28	1
2011	Nation (public)	36*	64*	31*	2*
	Midwest <sup>1</sup>	30	70	35	2
	Illinois	40	60	26	1
2015	Nation (public)	33	67	33	2
	Midwest <sup>1</sup>	29	71	36	2
	Illinois	37	63	28	1

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction in 2015.

2011, and 2015 Science Assessments.

 $<sup>^{\</sup>rm 1}$  Region in which jurisdiction is located.

NOTE: The NAEP grade 8 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 140 or lower; *Basic*, 141–169; *Proficient*, 170–214; and *Advanced*, 215 or above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009,

# Comparisons Between Illinois, the Nation, and Participating States and Jurisdictions

Forty-six states and the Department of Defense Schools participated in the 2015 science assessment at grades 4 and 8. References to "jurisdictions" in the results statements may include states, the District of Columbia, and/or Department of Defense Schools.

## Comparisons by Average Scores

Figures 2-A and 2-B compare Illinois' 2015 overall science average scores at grades 4 and 8 with those of public schools in the nation and all other participating states and jurisdictions. The different shadings indicate whether the average score of the nation (public), a state, or a jurisdiction was found to be higher than, not significantly different from, or lower than that of Illinois in the NAEP 2015 science assessment.

#### Grade 4 Scale Score Comparison Results

• The average score for students in Illinois was higher than 6 jurisdictions, not significantly different from 15 jurisdictions, and lower than 25 jurisdictions.

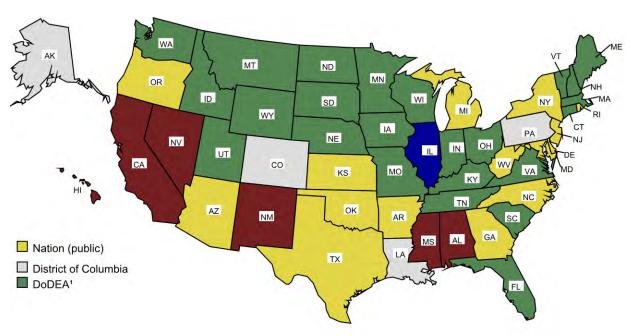
#### **Grade 8 Scale Score Comparison Results**

• The average score for students in Illinois was higher than 5 jurisdictions, not significantly different from 12 jurisdictions, and lower than 29 jurisdictions.

Figure 2-A

## The Nation's Report Card 2015 State Assessment

Illinois' average scale score in NAEP science for fourth-grade public school students compared with scores for the nation and other participating jurisdictions: 2015





<sup>&</sup>lt;sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

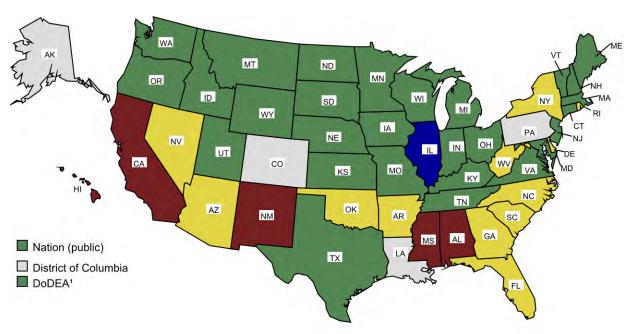
NOTE: Significance tests used a multiple-comparison procedure based on all jurisdictions that participated.

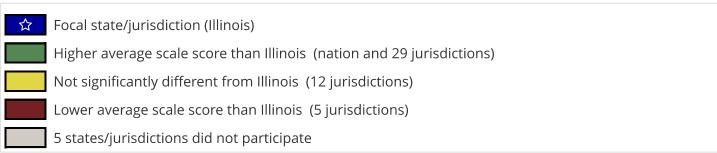
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Science Assessment.

Figure 2-B

## The Nation's Report Card 2015 State Assessment

Illinois' average scale score in NAEP science for eighth-grade public school students compared with scores for the nation and other participating jurisdictions: 2015





Department of Defense Education Activity (overseas and domestic schools).

NOTE: Significance tests used a multiple-comparison procedure based on all jurisdictions that participated.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Science Assessment.

## Comparisons by Achievement Levels

Figures 3-A and 3-B permit comparisons of all jurisdictions (and the nation) participating in the NAEP 2015 science assessment in terms of percentages of grades 4 and 8 students performing at or above *Proficient*. The participating states and jurisdictions are grouped into categories reflecting whether the percentage of their students performing at or above *Proficient* (including *Advanced*) was found to be higher than, not significantly different from, or lower than the percentage in Illinois .

Note that the selected state is listed first in its category, and the other states and jurisdictions within each category are listed alphabetically; statistical comparisons among jurisdictions in each of the three categories are not included in this report. However, statistical comparisons among states by achievement level can be calculated online by using the NAEP Data Explorer at <a href="http://nces.ed.gov/nationsreportcard/naepdata/">http://nces.ed.gov/nationsreportcard/naepdata/</a>.

#### Grade 4 Achievement-Level Comparison Results

- The percentage of students performing at or above the *Proficient* level in Illinois was greater than the percentage in 6 jurisdictions, not significantly different from those in 19 jurisdictions, and smaller than those in 21 jurisdictions.
- The percentage of students performing at or above the *Basic* level in Illinois was greater than the percentage in 5 jurisdictions, not significantly different from those in 16 jurisdictions, and smaller than those in 25 jurisdictions (data not shown).

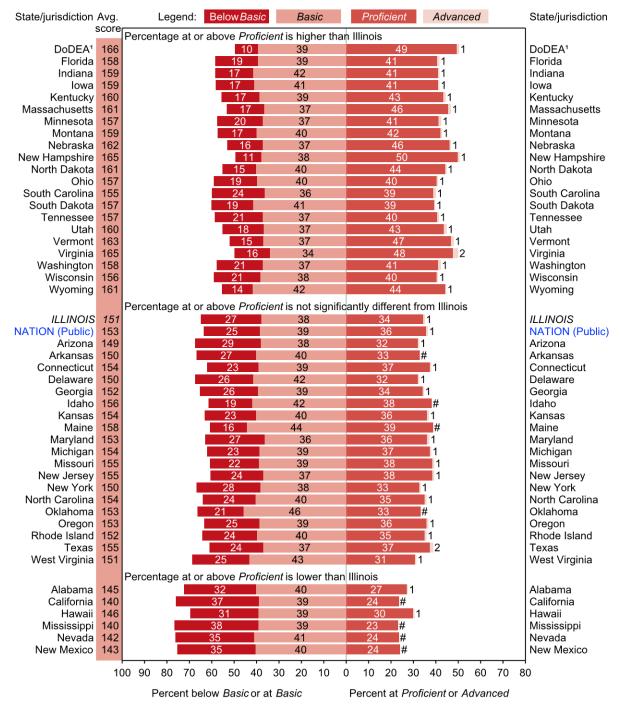
#### Grade 8 Achievement-Level Comparison Results

- The percentage of students performing at or above the *Proficient* level in Illinois was greater than the percentage in 5 jurisdictions, not significantly different from those in 10 jurisdictions, and smaller than those in 31 jurisdictions.
- The percentage of students performing at or above the *Basic* level in Illinois was greater than the percentage in 5 jurisdictions, not significantly different from those in 13 jurisdictions, and smaller than those in 28 jurisdictions (data not shown).

Figure 3-A

#### The Nation's Report Card 2015 State Assessment

Average scale scores in NAEP science for fourth-grade public school students, percentage within each achievement level, and Illinois' percentage at or above *Proficient* compared with the nation and other participating jurisdictions: 2015



<sup>#</sup> Rounds to zero.

NOTE: The bars above contain percentages of students in each NAEP science achievement level. Achievement levels corresponding to each population of students are aligned at the point where the *Proficent* category begins, so that they may be compared at *Proficent* and above. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers. The shaded bars are graphed using unrounded numbers. Significance tests used a multiple-comparison procedure based on all jurisdictions that participated.

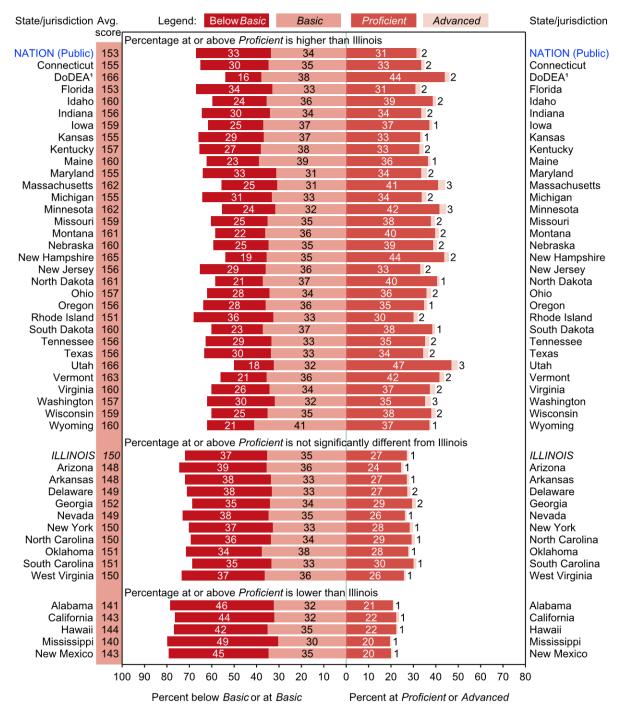
SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Science Assessment.

<sup>&</sup>lt;sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

Figure 3-B

#### The Nation's Report Card 2015 State Assessment

Average scale scores in NAEP science for eighth-grade public school students, percentage within each achievement level, and Illinois' percentage at or above *Proficient* compared with the nation and other participating jurisdictions: 2015



<sup>&</sup>lt;sup>1</sup> Department of Defense Education Activity (overseas and domestic schools).

NOTE: The bars above contain percentages of students in each NAEP science achievement level. Achievement levels corresponding to each population of students are aligned at the point where the *Proficent* category begins, so that they may be compared at *Proficent* and above. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers. The shaded bars are graphed using unrounded numbers. Significance tests used a multiple-comparison procedure based on all jurisdictions that participated.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Science Assessment.

## **Science Performance of Selected Student Groups**

This section of the report presents trend results for public school students in Illinois and the nation by demographic characteristics. Student performance data are reported for

- race/ethnicity
- gender
- student eligibility for the National School Lunch Program
- type of location
- parents' highest level of education

Results for each of the variables are reported in tables that include the percentage of students in each group in the first column and the average scale score in the second column. The columns to the right show the percentage of students below *Basic* and at or above each achievement level.

Results by students' race/ethnicity and gender include statements about score point differences between student groups (e.g., between White and Black or White and Hispanic students, or between male and female students) in 2015 and in the first assessment year. Because these differences are calculated using unrounded values, they may differ slightly from what would be obtained by subtracting the rounded values that appear in the tables. Statements indicating a narrowing or widening of the gap in students' scores are only made if the change in the gap from the first assessment year to 2015 was found to be statistically significant.

The reader is cautioned against making causal inferences about group differences, as a complex mix of educational and socioeconomic factors may affect student performance. NAEP collects information on many additional variables, including school and home factors related to achievement. This information is in an interactive database available on the NAEP website at <a href="http://nces.ed.gov/nationsreportcard/naepdata/">http://nces.ed.gov/nationsreportcard/naepdata/</a>.

## Race/Ethnicity

Prior to 2011, student race/ethnicity was obtained from school records and reported for the six mutually exclusive categories shown below:

- White
- Black
- Hispanic
- Asian/Pacific Islander
- American Indian/Alaska Native
- Unclassified (not shown in tables)

Students who identified with more than one of the other five categories were classified as "Other" and were included as part of the "Unclassified" category along with students who had a background other than the ones listed or whose race/ethnicity could not be determined.

In compliance with new standards from the U.S. Office of Management and Budget for collecting and reporting data on race/ethnicity, additional information was collected in 2011 so that results could be reported separately for Asian students, Native Hawaiian/Other Pacific Islander students, and students identifying with two or more races. Beginning in 2011, all of the students participating in NAEP were identified as one of the seven racial/ethnic categories listed below:

- White
- Black or African American
- Hispanic
- Asian
- American Indian/Alaska Native
- Native Hawaiian/Other Pacific Islander
- Two or More Races

As in earlier years, students identified as Hispanic were classified as Hispanic in 2011 even if they were also identified with another racial/ethnic group. Students who identified with two or more of the other racial/ethnic groups (e.g., White and Black) would have been classified as "Other" and reported as part of the "Unclassified" category prior to 2011, and classified as "Two or More Races" in 2011.

When comparing the results for racial/ethnic groups prior to 2011, data for Asian and Native Hawaiian/Other Pacific Islander students were combined into a single Asian/Pacific Islander category.

Tables 3-A and 3-B show average scale scores and percentage of students by achievement-level data for public school students at grades 4 and 8 in Illinois and the nation, by race/ethnicity.

#### Grade 4 Scale Score Results by Race/Ethnicity

- In 2015, White students in Illinois had an average scale score that was higher than the average scores of Black and Hispanic students, but lower than the average score of Asian/Pacific Islander students.
- In 2015, the average scale scores of White, Black, and Asian/Pacific Islander students in Illinois were not significantly different from their respective score in 2009.
- In 2015, the average scale score of Hispanic students in Illinois was higher than their respective score in 2009.
- In 2015, Black students in Illinois had an average score that was lower than that of White students by 41 points. In 2009, the average score for Black students was lower than that of White students by 44 points.
- In 2015, Hispanic students in Illinois had an average score that was lower than that of White students by 29 points. This performance gap was narrower than that of 2009 (35 points).

#### Grade 4 Achievement-Level Results by Race/Ethnicity

- In 2015 in Illinois, the percentage of White students performing at or above *Proficient* was greater than the corresponding percentages of Black and Hispanic students, but smaller than the percentage of Asian/Pacific Islander students.
- In 2015, the percentages of White, Black, and Asian/Pacific Islander students in Illinois performing at or above *Proficient* were not significantly different from the percentage in 2009.
- In 2015, the percentage of Hispanic students in Illinois performing at or above *Proficient* was greater than the percentage in 2009.

Table 3-A

## The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP science, by race/ethnicity, year, and jurisdiction: 2009 and 2015

Race/ethnicity, year, and jurisdiction			Percent				
		Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
White							
2009	Nation (public)	54*	162*	14*	86*	46*	1*
	Illinois	51	164	13	87	48	1
2015	Nation (public)	49	165	12	88	50	1
	Illinois	46	166	10	90	51	1
Black							
2009	Nation (public)	16*	127*	54*	46*	10*	#
	Illinois	19	120	63	37	9	#
2015	Nation (public)	15	132	47	53	14	#
	Illinois	18	125	55	45	10	#
Hispanic							
2009	Nation (public)	22*	130*	48*	52*	13*	#
	Illinois	22	129*	49	51	10*	#
2015	Nation (public)	26	138	39	61	20	#
See notes at end of t	Illinois	27	137	41	59	19	#

See notes at end of table.

Table 3-A

## The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP science, by race/ethnicity, year, and jurisdiction: 2009 and 2015—Continued

Race/ethnicity, year, and jurisdiction			Percent					
		Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced	
Asian/Pacific Is	Asian/Pacific Islander							
2009	Nation (public)	5	160*	20*	80*	45*	2	
	Illinois	5	166	14	86	51	3	
2015	Nation (public)	5	166	15	85	52	3	
	Illinois	6	173	8	92	63	3	
American India	an/Alaska Native							
2009	Nation (public)	1	137	40	60	19	#	
	Illinois	#	‡	‡	‡	‡	‡	
2015	Nation (public)	1	141	36	64	22	#	
	Illinois	#	‡	‡	‡	‡	‡	

<sup>#</sup> Rounds to zero.

NOTE: The NAEP grade 4 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 130 or lower; *Basic*, 131–166; *Proficient*, 167–223; and *Advanced*, 224 or above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2015 Science Assessments.

<sup>‡</sup> Reporting standards not met.

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

#### Grade 8 Scale Score Results by Race/Ethnicity

- In 2015, White students in Illinois had an average scale score that was higher than the average scores of Black and Hispanic students, but not significantly different from the average score of Asian/Pacific Islander students.
- In 2015, the average scale scores of White and Asian/Pacific Islander students in Illinois were not significantly different from their respective scores in 2009 and 2011.
- In 2015, the average scale scores of Black and Hispanic students in Illinois were higher than their respective score in 2009, but not significantly different from their respective score in 2011.
- In 2015, Black students in Illinois had an average score that was lower than that of White students by 36 points. This performance gap was narrower than that of 2009 (44 points).
- In 2015, Hispanic students in Illinois had an average score that was lower than that of White students by 23 points. This performance gap was narrower than that of 2009 (30 points).

#### Grade 8 Achievement-Level Results by Race/Ethnicity

- In 2015 in Illinois, the percentage of White students performing at or above *Proficient* was greater than the corresponding percentages of Black and Hispanic students, but not significantly different from the percentage of Asian/Pacific Islander students.
- In 2015, the percentages of White, Black, Hispanic, and Asian/Pacific Islander students in Illinois performing at or above *Proficient* were not significantly different from the percentages of their respective peers in 2009 and 2011.

Table 3-B

## The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by race/ethnicity, year, and jurisdiction: 2009, 2011, and 2015

Race/ethnicity, year, and jurisdiction				Percent				
		Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced	
White								
2009	Nation (public)	56*	161*	23*	77*	41*	2*	
	Illinois	58*	162	21	79	41	2	
2011	Nation (public)	54*	163*	21*	79*	43*	2	
	Illinois	51	161	22	78	39	2	
2015	Nation (public)	51	165	19	81	46	3	
	Illinois	50	162	21	79	41	1	
Black								
2009	Nation (public)	16	125*	68*	32*	8*	#	
	Illinois	19	118*	77	23	4	#	
2011	Nation (public)	16	128*	64*	36*	9*	#	
	Illinois	18	120	75	25	4	#	
2015	Nation (public)	15	131	60	40	11	#	
	Illinois	16	126	68	32	6	#	
Hispanic								
2009	Nation (public)	21*	131*	59*	41*	12*	#	
	Illinois	18*	131*	60	40	10	#	
2011	Nation (public)	22*	136*	52*	48*	16	#	
	Illinois	23	135	56	44	11	#	
2015	Nation (public)	25	139	49	51	18	1	
	Illinois	26	139	51	49	14	#	

See notes at end of table.

Table 3-B

## The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by race/ethnicity, year, and jurisdiction: 2009, 2011, and 2015—Continued

Race/ethnicity, year, and jurisdiction					Perc	ent	
		Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
Asian/Pacific Islander							
2009	Nation (public)	5	159*	28*	72*	40*	3
	Illinois	4	167	20	80	48	5
2011	Nation (public)	5	159*	26	74	41	3
	Illinois	5	163	20	80	42	4
2015	Nation (public)	6	163	22	78	46	4
	Illinois	5	162	23	77	40	2
American India	n/Alaska Native						
2009	Nation (public)	1	138	51	49	18	#
	Illinois	#	‡	‡	‡	‡	‡
2011	Nation (public)	1	141	48	52	19	1
	Illinois	#	‡	‡	‡	‡	‡
2015	Nation (public)	1	140	47	53	17	#
	Illinois	#	‡	‡	‡	‡	‡

<sup>#</sup> Rounds to zero.

NOTE: The NAEP grade 8 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 140 or lower; *Basic*, 141–169; *Proficient*, 170–214; and *Advanced*, 215 or above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Black includes African American, Hispanic includes Latino, and Pacific Islander includes Native Hawaiian. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, and 2015 Science Assessments.

<sup>‡</sup> Reporting standards not met.

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

#### NAEP 2015 Science Report for Illinois

Tables 4-A and 4-B show average scale scores and percentage of students by achievement-level data for the seven racial/ethnic categories used in 2011 and 2015: White, Black, Hispanic, Asian, American Indian/Alaska Native, Native Hawaiian/Other Pacific Islander, and Two or More Races at grades 4 and 8 in Illinois and the nation.

Table 4-A

# The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP science, by race/ethnicity, year, and jurisdiction: 2015

				Percent					
Race/ethnicity jurisdiction	Race/ethnicity, year, and jurisdiction		Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced		
White									
2015	Nation (public)	49	165	12	88	50	1		
	Illinois	46	166	10	90	51	1		
Black									
2015	Nation (public)	15	132*	47*	53*	14*	#		
	Illinois	18	125	55	45	10	#		
Hispanic									
2015	Nation (public)	26	138	39	61	20	#		
	Illinois	27	137	41	59	19	#		
Asian									
2015	Nation (public)	5	168	13*	87*	54	3		
	Illinois	5	173	8	92	63	3		

See notes at end of table.

**Table** 4-A

## The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP science, by race/ethnicity, year, and jurisdiction: 2015—Continued

					Perc	ent	
Race/ethnicity, jurisdiction	year, and	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
American India	American Indian/Alaska Native						
2015	Nation (public)	1	141	36	64	22	#
	Illinois	#	‡	‡	‡	‡	‡
Native Hawaiian/Other Pacific							
Islander							
2015	Nation (public)	#	142	36	64	25	#
	Illinois	#	‡	‡	‡	‡	‡
Two or More Races							
2015	Nation (public)	3	158	20	80	41	2
	Illinois	3	152	24	76	35	2

<sup>#</sup> Rounds to zero.

\* Value is significantly different (p < .05) from the value for the same group in Illinois.

NOTE: The NAEP grade 4 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 130 or lower; Basic, 131–166; Proficient, 167–223; and Advanced, 224 or above. At or above Basic includes Basic, Proficient, and Advanced. At or above Proficient includes Proficient and Advanced. Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding, All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015

Science Assessment.

<sup>‡</sup> Reporting standards not met.

Table 4-B

# The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by race/ethnicity, year, and jurisdiction: 2011 and 2015

					Perc	ent	
Race/ethnicity jurisdiction	, year, and	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
White							
2011	Nation (public)	54*	163*	21*	79*	43*	2
	Illinois	51	161	22	78	39	2
2015	Nation (public)	51	165	19	81	46	3
	Illinois	50	162	21	79	41	1
Black							
2011	Nation (public)	16	128*	64*	36*	9*	#
	Illinois	18	120	75	25	4	#
2015	Nation (public)	15	131	60	40	11	#
	Illinois	16	126	68	32	6	#
Hispanic							
2011	Nation (public)	22*	136*	52*	48*	16	#
	Illinois	23	135	56	44	11	#
2015	Nation (public)	25	139	49	51	18	1
	Illinois	26	139	51	49	14	#
Asian							
2011	Nation (public)	5	160*	25*	75*	42*	3
	Illinois	5	163	20	80	42	5
2015	Nation (public)	5	165	20	80	48	4
	Illinois	5	163	21	79	41	2

See notes at end of table.

**Table** 4-B

## The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by race/ethnicity, year, and jurisdiction: 2011 and 2015—Continued

					Perc	ent	
Race/ethnicity, jurisdiction	Race/ethnicity, year, and jurisdiction		Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
American India	an/Alaska Native						
2011	Nation (public)	1	141	48	52	19	1
	Illinois	#	‡	‡	‡	‡	‡
2015	Nation (public)	1	140	47	53	17	#
	Illinois	#	‡	‡	‡	‡	‡
Native Hawaiia	an/Other Pacific						
Islander							
2011	Nation (public)	#	138	49	51	17	#
	Illinois	#	‡	‡	‡	‡	‡
2015	Nation (public)	#	137	53	47	17	1
	Illinois	#	‡	‡	‡	‡	‡
Two or More R	aces						
2011	Nation (public)	2*	155	31	69	34	3
	Illinois	2	‡	‡	‡	‡	‡
2015	Nation (public)	2	158	28	72	37	3
// Daywada ta aawa	Illinois	2	‡	‡	‡	‡	‡

<sup>#</sup> Rounds to zero.

NOTE: The NAEP grade 8 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below Basic, 140 or lower; Basic, 141–169; Proficient, 170–214; and Advanced, 215 or above. At or above Basic includes Basic, Proficient, and Advanced. At or above Proficient includes Proficient and Advanced. Black includes African American and Hispanic includes Latino. Race categories exclude Hispanic origin. Detail may not sum to totals because of rounding, All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2011 and 2015 Science Assessments.

<sup>‡</sup> Reporting standards not met. \* Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

## Gender

Information on student gender is reported by the student's school when rosters of the students eligible to be assessed are submitted to NAEP.

Tables 5-A and 5-B show average scores and achievement-level data for public school students at grades 4 and 8 in Illinois and the nation, by gender.

#### Grade 4 Scale Score Results by Gender

- In 2015, male students in Illinois had an average score in science (152) that was not significantly different from that of female students (151). In 2009, male students in Illinois had an average score in science (148) that was not significantly different from that of female students (147).
- In 2015, male students in Illinois had an average scale score in science (152) that was not significantly different from that of male students in public schools across the nation (153). Similarly, female students in Illinois had an average scale score (151) that was not significantly different from that of female students across the nation (153).
- In Illinois, the average scale score of male students in 2015 was not significantly different from the score of male students in 2009.
- In Illinois, the average scale score of female students in 2015 was not significantly different from the score of female students in 2009.

#### Grade 4 Achievement-Level Results by Gender

- In the 2015 assessment, 36 percent of male students and 34 percent of female students performed at or above *Proficient* in Illinois. The difference between these percentages was not statistically significant.
- The percentage of male students in Illinois' public schools who were at or above *Proficient* in 2015 (36 percent) was not significantly different from that of male students in the nation (38 percent).
- The percentage of female students in Illinois' public schools who were at or above *Proficient* in 2015 (34 percent) was not significantly different from that of female students in the nation (36 percent).
- In Illinois, the percentage of male students performing at or above *Proficient* in 2015 was not significantly different from the percentage of students in 2009.
- In Illinois, the percentage of female students performing at or above *Proficient* in 2015 was not significantly different from the percentage of students in 2009.

**Table** 5-A

# The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP science, by gender, year, and jurisdiction: 2009 and 2015

					Perc	ent	
Gender, year,	and jurisdiction	Percentage of students	Average scale score				At Advanced
Male							
2009	Nation (public)	51	149*	29*	71*	34*	1*
	Illinois	50	148	31	69	34	1
2015	Nation (public)	51	153	25	75	38	1
	Illinois	52	152	26	74	36	1
Female							
2009	Nation (public)	49	148*	29*	71*	31*	#*
	Illinois	50	147	31	69	30	1
2015	Nation (public)	49	153	25	75	36	1
	Illinois	48	151	28	72	34	1

<sup>#</sup> Rounds to zero.

<sup>\*</sup> Value is significantly different (*p* < .05) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 4 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 130 or lower; Basic, 131–166; Proficient, 167–223; and Advanced, 224 or above. At or above Basic includes Basic, Proficient, and Advanced. At or above Proficient includes Proficient and Advanced. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2015 Science Assessments.

#### Grade 8 Scale Score Results by Gender

- In 2015, male students in Illinois had an average score in science (150) that was not significantly different from that of female students (149). In 2009, male students in Illinois had an average score in science (150) that was higher than that of female students (146).
- In 2015, male students in Illinois had an average scale score in science (150) that was lower than that of male students in public schools across the nation (154). Similarly, female students in Illinois had an average scale score (149) that was lower than that of female students across the nation (151).
- In Illinois, the average scale score of male students in 2015 was not significantly different from the scores of male students in 2009 and 2011.
- In Illinois, the average scale score of female students in 2015 was higher than the score of female students in 2011, but not significantly different from the score of female students in 2009.

#### Grade 8 Achievement-Level Results by Gender

- In the 2015 assessment, 30 percent of male students and 26 percent of female students performed at or above *Proficient* in Illinois. The difference between these percentages was not statistically significant.
- The percentage of male students in Illinois' public schools who were at or above *Proficient* in 2015 (30 percent) was smaller than that of male students in the nation (36 percent).
- The percentage of female students in Illinois' public schools who were at or above *Proficient* in 2015 (26 percent) was smaller than that of female students in the nation (31 percent).
- In Illinois, the percentage of male students performing at or above *Proficient* in 2015 was not significantly different from the corresponding percentages of students in 2009 and 2011.
- In Illinois, the percentage of female students performing at or above *Proficient* in 2015 was not significantly different from the corresponding percentages of students in 2009 and 2011.

**Table** 5-B

## The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by gender, year, and jurisdiction: 2009, 2011, and 2015

					Perc	ent	
Gender, year,	Gender, year, and jurisdiction		Average scale score	Below <i>Basic</i>	At or above Basic	At or above <i>Proficient</i>	At Advanced
Male							
2009	Nation (public)	51	151*	36*	64*	32*	2*
	Illinois	51	150	36	64	32	2
2011	Nation (public)	51	153*	34*	66*	34*	2
	Illinois	51	150	37	63	30	2
2015	Nation (public)	51	154	32	68	36	2
	Illinois	51	150	37	63	30	1
Female							
2009	Nation (public)	49	147*	40*	60*	26*	1*
	Illinois	49	146	42	58	25	1
2011	Nation (public)	49	148*	38*	62*	27*	1*
	Illinois	49	144*	43*	57*	21	1
2015	Nation (public)	49	151	35	65	31	1
	Illinois	49	149	37	63	26	1

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 8 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below Basic, 140 or lower; Basic, 141–169; Proficient, 170–214; and Advanced, 215 or above. At or above Basic includes Basic, Proficient, and Advanced. At or above Proficient includes Proficient and Advanced. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, and 2015 Science Assessments.

## Student Eligibility for the National School Lunch Program

NAEP collects data on eligibility for the federal program providing free or reduced-price school lunches. The free/reduced-price lunch component of the National School Lunch Program (NSLP) offered through the U.S. Department of Agriculture (USDA) is designed to ensure that children near or below the poverty line receive nourishing meals. Eligibility is determined through the USDA's Income Eligibility Guidelines, and results for this category of students are included as an indicator of lower family income.

Tables 6-A and 6-B show average scores and achievement-level data for public school students at grades 4 and 8 in Illinois and the nation by student eligibility for the NSLP.

#### Grade 4 Scale Score Results by Free/Reduced-Price School Lunch Eligibility

- In 2015, students in Illinois eligible for free/reduced-price lunch had an average science scale score of 137. This was lower than that of students in Illinois not eligible for this program (168).
- In 2015, students in Illinois who were eligible for free/reduced-price school lunch had an average score that was lower than that of students who were not eligible by 31 points. In 2009, the average score for students in Illinois who were eligible for free/reduced-price school lunch was lower than the score of those not eligible by 34 points.
- Students in Illinois eligible for free/reduced-price lunch had an average scale score (137) in 2015 that was lower than that of students in the nation who were eligible (140).
- In Illinois, students eligible for free/reduced-price lunch had an average science scale score in 2015 that was higher than that of eligible students in 2009.

#### Grade 4 Achievement-Level Results by Free/Reduced-Price School Lunch Eligibility

- In Illinois, 19 percent of students who were eligible for free/reduced-price lunch and 54 percent of those who were not eligible for this program performed at or above *Proficient* in 2015. These percentages were significantly different from one another.
- For students in Illinois in 2015 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (19 percent) was not significantly different from the corresponding percentage for their counterparts around the nation (22 percent).
- In Illinois, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* in 2015 was greater than the percentage in 2009.

Table 6-A

# The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP science, by National School Lunch Program eligibility status, year, and jurisdiction: 2009 and 2015

					Perc	ent	
Eligibility status jurisdiction	s, year, and	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
Eligible							
2009	Nation (public)	48*	134*	44*	56*	16*	#*
	Illinois	46*	129*	50*	50*	14*	#
2015	Nation (public)	55	140	37	63	22	#
	Illinois	54	137	41	59	19	#
Not eligible							
2009	Nation (public)	51*	163*	14*	86*	48*	1*
	Illinois	53*	163*	14*	86*	48*	1
2015	Nation (public)	44	169	10	90	55	2
	Illinois	46	168	10	90	54	1
Information no	t available						
2009	Nation (public)	1	143*	36	64	27	#
	Illinois	#	‡	‡	‡	‡	‡
2015	Nation (public)	1	156	24	76	41	1
	Illinois	#	‡	‡	‡	‡	‡

<sup>#</sup> Rounds to zero.

NOTE: The NAEP grade 4 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 130 or lower; *Basic*, 131–166; *Proficient*, 167–223; and *Advanced*, 224 or above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2015 Science Assessments.

<sup>‡</sup> Reporting standards not met.

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

#### Grade 8 Scale Score Results by Free/Reduced-Price School Lunch Eligibility

- In 2015, students in Illinois eligible for free/reduced-price lunch had an average science scale score of 137. This was lower than that of students in Illinois not eligible for this program (164).
- In 2015, students in Illinois who were eligible for free/reduced-price school lunch had an average score that was lower than that of students who were not eligible by 27 points. This performance gap was narrower than that of 2009 (34 points).
- Students in Illinois eligible for free/reduced-price lunch had an average scale score (137) in 2015 that was lower than that of students in the nation who were eligible (140).
- In Illinois, students eligible for free/reduced-price lunch had an average science scale score in 2015 that was higher than that of eligible students in 2009 and 2011.

#### Grade 8 Achievement-Level Results by Free/Reduced-Price School Lunch Eligibility

- In Illinois, 14 percent of students who were eligible for free/reduced-price lunch and 44 percent of those who were not eligible for this program performed at or above *Proficient* in 2015. These percentages were significantly different from one another.
- For students in Illinois in 2015 who were eligible for free/reduced-price lunch, the percentage at or above *Proficient* (14 percent) was smaller than the corresponding percentage for their counterparts around the nation (18 percent).
- In Illinois, the percentage of students eligible for free/reduced-price lunch who performed at or above *Proficient* in 2015 was greater than the corresponding percentages in 2009 and 2011.

**Table** 6-B

# The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by National School Lunch Program eligibility status, year, and jurisdiction: 2009, 2011, and 2015

					Perc	ent	
Eligibility status, jurisdiction	year, and	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
Eligible							
2009	Nation (public)	43*	133*	57*	43*	14*	#*
	Illinois	39*	127*	65*	35*	9*	#
2011	Nation (public)	48*	137*	52*	48*	16*	#
	Illinois	48*	132*	59*	41*	10*	#
2015	Nation (public)	51	140	48	52	18	#
	Illinois	53	137	52	48	14	#
Not eligible							
2009	Nation (public)	56*	161*	24*	76*	41*	2*
	Illinois	61*	161	22	78	41	2
2011	Nation (public)	52*	164*	20*	80*	44*	3*
	Illinois	52*	162	22	78	41	2
2015	Nation (public)	47	167	17	83	49	3
	Illinois	46	164	19	81	44	2
Information not	available						
2009	Nation (public)	1	150	36	64	32	1
	Illinois	#	‡	‡	‡	‡	‡
2011	Nation (public)	#*	143*	46*	54*	22*	1
	Illinois	#	‡	‡	‡	‡	‡
2015	Nation (public)	1	158	28	72	40	2
	Illinois	#	‡	‡	‡	‡	‡

<sup>#</sup> Rounds to zero.

\* Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015. NOTE: The NAEP grade 8 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below Basic, 140 or lower; Basic, 141–169; Proficient, 170–214; and Advanced, 215 or above. At or above Basic includes Basic, Proficient, and Advanced. At or above Proficient includes Proficient and Advanced. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, and 2015 Science Assessments.

<sup>‡</sup> Reporting standards not met.

## Type of Location

Schools that participated in the assessment were classified as being located in four mutually exclusive types of communities: city, suburb, town, and rural. These categories indicate the geographic locations of schools. "City" is a geographical term meaning the principal city of a U.S. Census Bureau-defined Core-Based Statistical Area and is not synonymous with "inner city." More detail on the classification of type of location is available at <a href="http://nces.ed.gov/ccd/Rural\_Locales.asp">http://nces.ed.gov/ccd/Rural\_Locales.asp</a>.

Tables 7-A and 7-B show average scores and achievement-level data for public school students at grades 4 and 8 in Illinois and the nation, by type of location.

#### Grade 4 Scale Score Results by Type of Location

- In 2015, the average scale score of students in Illinois attending public schools in city locations was lower than the scores of students in suburban, town, and rural schools.
- In 2015, students attending public schools in city, suburban, town, and rural locations in Illinois had average scale scores that were not significantly different from the average scale scores of students in city, suburban, town, and rural locations in the nation.
- In 2015, students attending public schools in city, suburban, town, and rural locations in Illinois had average scale scores that were not significantly different from the average scale scores of students in city, suburban, town, and rural locations in 2009 in Illinois.

#### Grade 4 Achievement-Level Results by Type of Location

- In 2015, the percentage of students in Illinois' public schools in city locations who performed at or above *Proficient* was smaller than the corresponding percentages of students in suburban and rural schools, but was not significantly different from the percentage of students in town schools.
- The percentages of students in Illinois' public schools in city, suburban, town, and rural locations who performed at or above *Proficient* in 2015 were not significantly different from those of students in city, suburban, town, and rural locations in the nation.
- The percentages of students in Illinois' public schools in city, suburban, town, and rural locations who performed at or above *Proficient* in 2015 were not significantly different from those of students in city, suburban, town, and rural locations in 2009 in Illinois.

Table 7-A

# The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP science, by type of location, year, and jurisdiction: 2009 and 2015

					Perc	ent	
Type of location jurisdiction	n, year, and	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
City							
2009	Nation (public)	30	140*	39*	61*	24*	1*
	Illinois	31	133	47	53	20	#
2015	Nation (public)	31	146	33	67	30	1
	Illinois	32	141	39	61	26	1
Suburb							
2009	Nation (public)	36*	153*	25*	75*	36*	1
	Illinois	44	151	27	73	35	1
2015	Nation (public)	40	156	21	79	41	1
	Illinois	50	155	23	77	39	1
Town							
2009	Nation (public)	12	149*	27*	73*	32*	#
	Illinois	10	157	19	81	39	#
2015	Nation (public)	11	152	24	76	35	1
	Illinois	7	155	21	79	38	1
Rural							
2009	Nation (public)	22*	154*	22*	78*	36*	#
	Illinois	14	161	14	86	44	1
2015	Nation (public)	18	157	20	80	40	1
	Illinois	11	161	14	86	42	1

<sup>#</sup> Rounds to zero.

NOTE: The NAEP grade 4 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 130 or lower; *Basic*, 131–166; *Proficient*, 167–223; and *Advanced*, 224 or above. At or above *Basic* includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2015 Science Assessments.

<sup>\*</sup> Value is significantly different ( $\rho$  < .05) from the value for the same jurisdiction and student group in 2015.

#### Grade 8 Scale Score Results by Type of Location

- In 2015, the average scale score of students in Illinois attending public schools in city locations was lower than the scores of students in suburban, town, and rural schools.
- In 2015, students attending public schools in city, town, and rural locations in Illinois had average scale scores that were not significantly different from the average scale scores of students in city, town, and rural locations in the nation.
- In 2015, students attending public schools in suburban locations in Illinois had an average scale score that was lower than the average scale score of students in suburban locations in the nation.
- In 2015, students attending public schools in city, suburban, town, and rural locations in Illinois had average scale scores that were not significantly different from the average scale scores of students in city, suburban, town, and rural locations in 2009 and 2011 in Illinois.

## Grade 8 Achievement-Level Results by Type of Location

- In 2015, the percentage of students in Illinois' public schools in city locations who performed at or above *Proficient* was smaller than the corresponding percentages of students in suburban and rural schools, but was not significantly different from the percentage of students in town schools.
- The percentages of students in Illinois' public schools in city and suburban locations who performed at or above *Proficient* in 2015 were smaller than those of students in city and suburban locations in the nation.
- The percentages of students in Illinois' public schools in town and rural locations who performed at or above *Proficient* in 2015 were not significantly different from those of students in town and rural locations in the nation.
- The percentages of students in Illinois' public schools in city, suburban, town, and rural locations who performed at or above *Proficient* in 2015 were not significantly different from those of students in city, suburban, town, and rural locations in 2009 and 2011 in Illinois.

**Table** 7-B

# The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by type of location, year, and jurisdiction: 2009, 2011, and 2015

					Perce	ent		
Type of location	on, year, and	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced	
City								
2009	Nation (public)	27*	139*	50*	50*	21*	1	
	Illinois	27	133	58	42	17	1	
2011	Nation (public)	29	142*	47*	53*	23*	1	
	Illinois	30	136	54	46	17	1	
2015	Nation (public)	29	145	42	58	26	2	
	Illinois	28	140	50	50	20	1	
Suburb								
2009	Nation (public)	37*	152*	34*	66*	33*	2	
	Illinois	47	152	34	66	32	2	
2011	Nation (public)	36*	155*	31*	69*	35*	2	
	Illinois	46	150	37	63	29	1	
2015	Nation (public)	41	157	29	71	37	2	
	Illinois	54	152	34	66	30	1	
Town								
2009	Nation (public)	14*	149*	37*	63*	28*	1	
	Illinois	10	152	33	67	31	#	
2011	Nation (public)	13*	152	34	66	30	1	
	Illinois	11	152	33	67	25	#	
2015	Nation (public)	12	153	32	68	32	1	
	Illinois	9	152	34	66	27	1	
Rural								
2009	Nation (public)	23*	154*	31*	69*	33*	1	
	Illinois	15	160	24	76	38	2	
2011	Nation (public)	23*	156	29	71	35	1	
	Illinois	13	159	23	77	36	1	
2015	Nation (public)	19	156	29	71	35	1	
	Illinois	10	162	20	80	42	1	

NOTE: The NAEP grade 8 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below Basic, 140 or lower; Basic, 141–169; Proficient, 170–214; and Advanced, 215 or above. At or above Basic includes Basic, Proficient, and Advanced. At or above Proficient includes Proficient and Advanced. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009,

2011, and 2015 Science Assessments.

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

## Parents' Highest Level of Education

Eighth-grade students who participated in the 2015 NAEP assessment were asked to indicate the highest level of education they thought their father and their mother had completed. Five response options—did not finish high school, graduated from high school, some education after high school, graduated from college, and "I don't know"—were offered. The highest level of education reported for either parent was used in the analysis. Fourth-graders were not asked about their parents' education level because their responses in previous NAEP assessments were not reliable, and a large percentage of them chose the "I don't know" option.

The results by highest level of parental education are shown in Table 8.

## Grade 8 Scale Score Results by Parents' Highest Level of Education

- In 2015, students in Illinois who reported that a parent had graduated from college had an average scale score that was higher than the average scores of students with a parent in any of the following education categories: some education after high school, graduated from high school, and did not finish high school.
- In 2015, the average scale scores for students in Illinois who reported that a parent had graduated from college or had graduated from high school were lower than the corresponding scores of students in the nation.
- In 2015, the average scale scores for students in Illinois who reported that a parent had some education after high school or had not finished high school were not significantly different from the corresponding scores of students in the nation.
- In 2015, the average scale scores for students in Illinois who reported that a parent had graduated from college, had some education after high school, had graduated from high school, or had not finished high school were not significantly different from the corresponding scores of students in 2009 and 2011.

#### Grade 8 Achievement-Level Results by Parents' Highest Level of Education

- In 2015, the percentage of students performing at or above *Proficient* in Illinois who reported that a parent had graduated from college was greater than the percentage for students whose parents' highest level of education was in any of the following education categories: some education after high school, graduated from high school, and did not finish high school.
- In 2015, the percentages of students in Illinois reporting that a parent had graduated from college or had graduated from high school and who performed at or above *Proficient* were smaller than the corresponding percentages of students in the nation.
- In 2015, the percentages of students in Illinois reporting that a parent had some education after high school or had not finished high school and who performed at or above *Proficient* were not significantly different from the corresponding percentages of students in the nation.
- In 2015 in Illinois, the respective percentages of students reporting that a parent had graduated from college, had some education after high school, had graduated from high school, or had not finished high school and who performed at or above *Proficient* were not significantly different from the corresponding percentages of students in 2009 and 2011.

**Table** 8

## The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by highest parental education level, year, and jurisdiction: 2009, 2011, and 2015

					Perc	ent	
Highest parent year, and juris	tal education level, diction	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
Did not finish l	nigh school						
2009	Nation (public)	8	131*	59*	41*	11*	#
	Illinois	6	131	61	39	10	#
2011	Nation (public)	8	133*	57*	43*	12	#
	Illinois	8	130	61	39	6	#
2015	Nation (public)	8	137	52	48	15	#
	Illinois	7	137	53	47	11	#
Graduated from	m high school						
2009	Nation (public)	17*	139*	50*	50*	17	#
	Illinois	15	138	51	49	17	#
2011	Nation (public)	17*	140*	48	52	18	#
	Illinois	16	136	54	46	13	#
2015	Nation (public)	16	141	46	54	18	#
	Illinois	16	137	53	47	13	#
Some education after high school							
2009	Nation (public)	17*	151*	34*	66*	29*	1
	Illinois	17	149	36	64	25	#
2011	Nation (public)	16*	153	31	69	30	1
	Illinois	17	148	38	62	23	#
2015	Nation (public)	15	154	30	70	31	1
	Illinois	16	152	33	67	27	1
Graduated from	m college						
2009	Nation (public)	47*	160*	26*	74*	41*	3
	Illinois	49	159	26	74	41	2
2011	Nation (public)	48*	162*	23*	77*	43*	3
	Illinois	46	159	25	75	39	2
2015	Nation (public)	49	164	21	79	46	3
	Illinois	48	160	24	76	40	2
Unknown							
2009	Nation (public)	11	129*	61*	39*	12*	#
	Illinois	13	126	65	35	9	#
2011	Nation (public)	11	132	58	42	14	#
	Illinois	12	129	64	36	9	#
2015	Nation (public)	12	134	55	45	15	#
	Illinois	13	131	60	40	12	#

<sup>#</sup> Rounds to zero.

\* Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015. NOTE: The NAEP grade 8 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below Basic, 140 or lower; Basic, 141–169; Proficient, 170–214; and Advanced, 215 or above. At or above Basic includes Basic, Proficient, and Advanced. At or above Proficient includes Proficient and Advanced. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, and 2015 Science Assessments.

# A More Inclusive NAEP: Students With Disabilities and English Language Learners

To ensure that the samples are representative, NAEP has established policies and procedures to maximize the inclusion of all students in its assessments. Every effort is made to ensure that all selected students who are capable of participating meaningfully in an assessment are assessed. While some students with disabilities (SD) and/or English language learners (ELL) can be assessed without any special procedures, others require accommodations to participate in NAEP. Still other SD and/or ELL students selected by NAEP may not be able to participate. Providing appropriate testing accommodations (e.g., providing extended time for some SD and/or ELL students to take the assessment) removes barriers that would otherwise prevent them from demonstrating their knowledge and skills. Local school staff who are familiar with these students are asked a series of questions to help them decide whether each student should participate in the assessment and whether the student needs accommodations.

In March 2010, the Governing Board adopted a new policy: NAEP Testing and Reporting on Students with Disabilities and English Language Learners. The policy defines specific inclusion goals for NAEP samples. At the national, state, and district levels, the goal is to include 95 percent of all students selected for the NAEP samples, and 85 percent of those in the NAEP sample who are identified as SD or ELL. See the National Assessment Governing Board's policy on NAEP Testing and Reporting on Students with Disabilities and English Language Learners at <a href="http://www.nagb.org/policies/PoliciesPDFs/Reporting">http://www.nagb.org/policies/PoliciesPDFs/Reporting</a> and Dissemination/naep\_testandreport\_studentswithdisabilities.pdf.

Tables 9-A and 9-B display data for grades 4 and 8 students in Illinois who were identified as SD and/or ELL, by whether they were excluded, assessed with accommodations, or assessed under standard conditions, as a percent of all grades 4 and 8 students in the state.

Tables 10-A and 10-B show the percentages of students assessed in Illinois by disability status and their performance on the NAEP assessment in terms of average scores and percentages performing below *Basic*, at or above *Proficient*, and at *Advanced* for grades 4 and 8

Tables 11-A and 11-B present the percentages of students assessed in Illinois by ELL status, their average scores, and their performance in terms of the percentages below *Basic*, at or above *Basic*, at or above *Proficient*, and at *Advanced* for grades 4 and 8

Tables 12-A and 12-B present the total number of grades 4 and 8 students assessed in each of the participating states and the percentage of students sampled who were excluded.

Table 9-A

## The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students identified as students with disabilities (SD) and/or English language learners (ELL) excluded and assessed in NAEP science as a percentage of all students, by assessment year and testing status: 2009 and 2015

			nd/or ELL		SD	ELL	
Year and test	ing status	Illinois	Nation (public)	Illinois	Nation (public)	Illinois	Nation (public)
2009	Identified	22	23	15	13	8	10
	Excluded	2	2	1	2	1	1
	Assessed without accommodations	5	9	3	3	2	6
	Assessed with accommodations	14	12	10	9	5	4
2015	Identified	22	24	13	15	10	12
	Excluded	2	2	1	1	1	1
	Assessed without accommodations	6	9	3	3	3	6
	Assessed with accommodations	14	14	9	11	7	5

NOTE: Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2015 Science Assessments.

**Table** 9-B

## The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students identified as students with disabilities (SD) and/or English language learners (ELL) excluded and assessed in NAEP science as a percentage of all students, by assessment year and testing status: 2009, 2011, and 2015

		SD and/or ELL		SD		ELL	
Year and te	esting status	Illinois	Nation (public)			Nation (public)	
2009	Identified	16	18	14	13	3	6
	Excluded	1	2	1	2	1	1
	Assessed without accommodations	3	5	2	2	1	3
	Assessed with accommodations	12	10	11	9	2	2
2011	Identified	17	18	14	13	4	6
	Excluded	1	2	1	2	#	#
	Assessed without accommodations	3	5	2	2	2	3
	Assessed with accommodations	12	11	11	9	2	2
2015	Identified	17	19	13	13	5	7
	Excluded	1	2	#	1	#	1
	Assessed without accommodations	3	5	1	2	2	3
	Assessed with accommodations	14	12	12	10	3	3

NOTE: Students identified as both SD and ELL were counted only once under the combined SD and/or ELL category, but were counted separately under the SD and ELL categories. Detail may not sum to totals because of rounding.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP),

<sup>2009, 2011,</sup> and 2015 Science Assessments.

**Table** 10-A

## The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP science, by students with disabilities (SD) status, year, and jurisdiction: 2009 and 2015

				Percent			
SD status, yea	r, and jurisdiction	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
SD							
2009	Nation (public)	12*	129*	50*	50*	16	#
	Illinois	14*	127	53	47	16	#
2015	Nation (public)	14	131	47	53	18	#
	Illinois	13	132	47	53	18	#
Not SD							
2009	Nation (public)	88*	151*	26*	74*	35*	1*
	Illinois	86*	151	27	73	35	1
2015	Nation (public)	86	156	21	79	39	1
	Illinois	87	154	24	76	38	1

<sup>#</sup> Rounds to zero.

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 4 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below \*Basic\*, 130 or lower; \*Basic\*, 131–166; \*Proficient\*, 167–223; and \*Advanced\*, 224 or above. At or above \*Basic\* includes \*Basic\*, \*Proficient\*, and \*Advanced\*. At or above \*Proficient\* includes \*Proficient\* and \*Includes Advanced. Performance comparisons may be affected by differences in exclusion rates for students with disabilities in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: Ú.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2015 Science Assessments.

**Table** 10-B

## The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by students with disabilities (SD) status, year, and jurisdiction: 2009, 2011, and 2015

				Percent			
SD status, yea	r, and jurisdiction	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
SD							
2009	Nation (public)	11*	122*	67	33	11	#
	Illinois	13	120	68	32	12	#
2011	Nation (public)	11*	124	66	34	11	#
	Illinois	13	123	68	32	10	#
2015	Nation (public)	12	124	66	34	11	#
	Illinois	13	122	70	30	13	1
Not SD							
2009	Nation (public)	89*	152*	34*	66*	31*	2*
	Illinois	87	152	35	65	31	1
2011	Nation (public)	89*	154*	32*	68*	33*	2*
	Illinois	87	151	36	64	28	1
2015	Nation (public)	88	157	29	71	36	2
	Illinois	87	154	32	68	30	1

<sup>#</sup> Rounds to zero.

\* Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 8 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 140 or lower; Basic, 141–169; Proficient, 170–214; and Advanced, 215 or above. At or above Basic includes Basic, Proficient, and Advanced. At or above Proficient includes Proficient and Advanced. Performance comparisons may be affected by differences in exclusion rates for students with disabilities in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: Ú.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, and 2015 Science Assessments.

Table 11-A

## The Nation's Report Card 2015 State Assessment

Percentage of fourth-grade public school students, average scale score, and achievement-level results in NAEP science, by English language learner (ELL) status, year, and jurisdiction: 2009 and 2015

				Percent			
ELL status, yea	ar, and jurisdiction	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
ELL							
2009	Nation (public)	10*	114*	67*	33*	5*	#
	Illinois	7*	113	65	35	5	#
2015	Nation (public)	11	121	59	41	9	#
	Illinois	10	115	69	31	4	#
Not ELL							
2009	Nation (public)	90*	153*	25*	75*	35*	1*
	Illinois	93*	150*	28*	72*	34	1
2015	Nation (public)	89	157	21	79	40	1
	Illinois	90	155	22	78	38	1

<sup>#</sup> Rounds to zero.

<sup>\*</sup> Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 4 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 130 or lower; *Basic*, 131–166; *Proficient*, 167–223; and *Advanced*, 224 or above. At or above *Basic*, includes *Basic*, *Proficient*, and *Advanced*. At or above *Proficient* includes *Proficient* and *Advanced*. Performance comparisons may be affected by differences in exclusion rates for English language learners in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: Ú.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009 and 2015 Science Assessments.

**Table** 11-B

## The Nation's Report Card 2015 State Assessment

Percentage of eighth-grade public school students, average scale score, and achievement-level results in NAEP science, by English language learner (ELL) status, year, and jurisdiction: 2009, 2011, and 2015

				Percent			
ELL status, yea	ar, and jurisdiction	Percentage of students	Average scale score	Below <i>Basic</i>	At or above <i>Basic</i>	At or above <i>Proficient</i>	At Advanced
ELL							
2009	Nation (public)	5*	103*	86*	14*	2	#
	Illinois	3*	102	88	12	1	#
2011	Nation (public)	6	106*	83	17	2	#
	Illinois	4*	103	90	10	1	#
2015	Nation (public)	6	110	82	18	3	#
	Illinois	5	110	86	14	1	#
Not ELL							
2009	Nation (public)	95*	151*	35*	65*	31*	1*
	Illinois	97*	149	38	62	29	1
2011	Nation (public)	94	153*	33*	67*	33*	2*
	Illinois	96*	149	38	62	27	1
2015	Nation (public)	94	156	30	70	35	2
	Illinois	95	152	34	66	29	1

<sup>#</sup> Rounds to zero.

\* Value is significantly different (p < .05) from the value for the same jurisdiction and student group in 2015.

NOTE: The NAEP grade 8 science scale ranges from 0 to 300. Achievement levels correspond to the following points on the NAEP science scales: below *Basic*, 140 or lower; Basic, 141–169; Proficient, 170–214; and Advanced, 215 or above. At or above Basic includes Basic, Proficient, and Advanced. At or above Proficient includes Proficient and Advanced. Performance comparisons may be affected by differences in exclusion rates for English language learners in the NAEP samples and by differences in sample sizes. Detail may not sum to totals because of rounding. All differences were calculated and tested using unrounded numbers.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2009, 2011, and 2015 Science Assessments.

Table 12-A

## The Nation's Report Card 2015 State Assessment

Number of fourth-grade public school students assessed in NAEP science and weighted percentage excluded, by state/jurisdiction: 2015

State/jurisdiction	Number assessed	Weighted percentage excluded
Nation (public)	110,800	2
Alabama	2,100	1
Arizona	2,400	2
Arkansas	2,200	1
California	2,700	1
Connecticut	2,400	2
Delaware	2,300	2
Florida	2,300	2
Georgia	2,300	2
Hawaii	2,300	2
Idaho	2,400	2
Illinois	3,500	2
Indiana	2,200	1
Iowa	2,400	2
Kansas	2,200	1
Kentucky	2,100	2
Maine	2,300	2
Maryland	2,200	1
Massachusetts	2,200	2
Michigan	2,200	2
Minnesota	2,500	2
Mississippi	2,300	1
Missouri	2,300	1
Montana	2,400	1
Nebraska	2,400	1
Nevada	2,200	2
New Hampshire	2,200	1
New Jersey	2,100 2,700	2 2
New Mexico New York	3,000	
North Carolina		1 2
	2,500	
North Dakota	2,400	1
Ohio Oklahoma	2,100	2
	2,300	2 2
Oregon	2,400	
Rhode Island	2,400	2
South Carolina	2,300	1
South Dakota	2,400	2
Tennessee	2,200	1
Texas	2,600	2
Utah	2,300	1
Vermont	1,900	1
Virginia	2,300	1
Washington	2,500	2
West Virginia	2,300	1
Wisconsin	2,500	1_
Wyoming	2,200	1_
Other jurisdictions		
DoDEA <sup>1</sup>	1,900	2

Department of Defense Education Activity (overseas and domestic schools).

NOTE: The number of students assessed is rounded to the nearest hundred.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Science

**Table** 12-B

## The Nation's Report Card 2015 State Assessment

Number of eighth-grade public school students assessed in NAEP science and weighted percentage excluded, by state/jurisdiction: 2015

State/jurisdiction	Number assessed	Weighted percentage excluded
Nation (public)	107,200	2
Alabama	2,100	1
Arizona	2,300	1
Arkansas	2,300	2
California	2,700	1
Connecticut	2,300	1
Delaware	2,200	1
Florida	2,300	3
Georgia	2,300	1
Hawaii	2,200	2
Idaho	2,300	1
Illinois	3,300	1
Indiana	2,100	1
Iowa	2,300	1
Kansas	2,300	2
Kentucky	2,100	1
Maine	2,200	2
Maryland	2,100	3
Massachusetts	2,200	2
Michigan	2,100	2
Minnesota	2,400	2
Mississippi	2,200	1
Missouri	2,200	1
Montana	2,100	
Nebraska	2,300	1 2
Nevada	2,300	1
		1
New Hampshire	2,300	
New Jersey	2,000	2
New Mexico New York	2,600	
North Carolina	2,700	1
	2,400	2 2
North Dakota	2,300	2
Ohio	2,100	2
Oklahoma	2,100	1
Oregon	2,200	2
Rhode Island	2,300	2
South Carolina	2,200	1
South Dakota	2,300	2
Tennessee	2,100	1
Texas	2,600	2
Utah	2,400	1
Vermont	1,800	1
Virginia	2,300	2
Washington	2,500	2
West Virginia	2,100	2
Wisconsin	2,300	1
Wyoming	2,000	2
Other jurisdictions	1 400	A
DoDEA <sup>1</sup>	1,400	1

Department of Defense Education Activity (overseas and domestic schools).

NOTE: The number of students assessed is rounded to the nearest hundred.

SOURCE: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics, National Assessment of Educational Progress (NAEP), 2015 Science

## Where to Find More Information

#### The NAEP Science Assessment

The latest news about the NAEP 2015 science assessment and the national results can be found on the NAEP website at <a href="http://nces.ed.gov/nationsreportcard/science">http://nces.ed.gov/nationsreportcard/science</a>. The individual snapshot reports for each participating state and other jurisdictions are also available in the state results section of the website at <a href="http://nces.ed.gov/nationsreportcard/states/">http://nces.ed.gov/nationsreportcard/states/</a>.

The Science Framework for the 2015 National Assessment of Educational Progress, on which this assessment is based, is available at the National Assessment Governing Board website at <a href="https://www.nagb.org/content/nagb/assets/documents/publications/frameworks/science/2015-science-framework.pdf">https://www.nagb.org/content/nagb/assets/documents/publications/frameworks/science/2015-science-framework.pdf</a>.

#### The NAEP Data Explorer (NDE)

The interactive database at <a href="http://nces.ed.gov/nationsreportcard/naepdata/">http://nces.ed.gov/nationsreportcard/naepdata/</a> includes student, teacher, and school variables for all participating states and other jurisdictions, the nation, and the other four regions. Data tables are also available for each jurisdiction, with all background questions cross-tabulated with the major demographic variables. Users can design and create tables and can perform tests of statistical significance at this website.

#### **Technical Documentation on the Web (TDW)**

The technical documentation section of the NAEP website <a href="http://nces.ed.gov/nationsreportcard/tdw/">http://nces.ed.gov/nationsreportcard/tdw/</a> contains information about the technical procedures and methods of NAEP. The TDW site is organized by topic (from Item Development through Analysis and Scaling) with subtopics, including information specific to a particular assessment. The content is written for researchers and assumes knowledge of educational measurement and testing.

Publications on the inclusion of students with disabilities and English language learners
References for a variety of research publications related to the assessment of students with special needs may be found at <a href="http://nces.ed.gov/nationsreportcard/about/inclusion.asp#research">http://nces.ed.gov/nationsreportcard/about/inclusion.asp#research</a>.

#### To order publications

Recent NAEP publications related to science are listed on the science page of the NAEP website and are available electronically. Publications can also be ordered from

Education Publications Center (ED Pubs)
U.S. Department of Education
P.O. Box 22207
Alexandria, VA 22304

Call toll free: 1-877-4ED-Pubs (1-877-433-7827)

TTY/TDD: 1-877-576-7734 FAX: 1-301-470-1244

Order online at: http://www.edpubs.gov.

The NAEP State Report Generator was developed for the NAEP 2015 reports by Phillip Leung, Bobby Rampey, Rick Hasney, and Ming Kuang.

## What is the Nation's Report Card™?

The Nation's Report CardT informs the public about the academic achievement of elementary and secondary students in the United States. Report cards communicate the findings of the National Assessment of Educational Progress (NAEP), a continuing and nationally representative measure of achievement in various subjects over time.

Since 1969, NAEP assessments have been conducted periodically in reading, mathematics, science, writing, U.S. history, civics, geography, and other subjects. NAEP collects and reports information on student performance at the national, state, and local levels, making the assessment an integral part of our nation's evaluation of the condition and progress of education. Only academic achievement data and related background information are collected. The privacy of individual students and their families is protected.

NAEP is a congressionally authorized project of the National Center for Education Statistics (NCES) within the Institute of Education Sciences of the U.S. Department of Education. The Commissioner of Education Statistics is responsible for carrying out the NAEP project. The National Assessment Governing Board oversees and sets policy for NAEP.

#### **U.S.Department of Education**

John B. King, Jr.

Secretary
U.S. Department
of Education

**Ruth Neild** 

Deputy Director for Policy and Research

Delegated Duties of the Director

#### **Peggy Carr**

Acting Commissioner National Center for Education

Statistics

### The National Assessment Governing Board

Terry Mazany, Chair

President and CEO
The Chicago Community Trust

Chicago, Illinois

Alberto Carvalho Superintendent

Miami-Dade County Public Schools

Miami, FL

Honorable Mitchell D. Chester

Commissioner

Massachusetts Department of Elementary and Secondary Education

Malden, Massachusetts

Lucille E. Davy

President and CEO

Transformative Education Solutions, LLC

Pennington, New Jersey

Frank Fernandez

Principal

Kaimuki Middle School Honolulu, Hawaii

**Honorable Anitere Flores** 

Senator

Florida State Senate Miami, Florida

Rebecca Gagnon

School Board Member Minneapolis Public Schools Minneapolis, Minnesota

**Shannon Garrison** 

Fourth-Grade Teacher

Solano Avenue Elementary School

Los Angeles, California

Honorable James Geringer

Director of Policy and Public Sector

Strategies

Environmental Systems Research

Institute (ESRI) Cheyenne, Wyoming Dorie P. Hicks

Principal and Chief Executive Officer Dr. Martin Luther King, Jr. Charter School for Science and Technology

New Orleans, Louisiana

**Andrew Dean Ho** 

Assistant Professor

Harvard Graduate School of Education

Harvard University Cambridge, Massachusetts

Carol Jago

Associate Director

California Reading and Literature Project

at UCLA

Oak Park, Illinois

Tonya Matthews

President and CEO Michigan Science Center

Detroit, Michigan

Tonva Miles

General Public Representative

Mitchellville, Maryland

Honorable Ronnie Musgrove

Founding Member Musgrove/Smith Law Jackson, Mississippi

Dale Nowlin

Twelfth-Grade Teacher Columbus North High School

Columbus, Indiana

Father Joseph M. O'Keefe, S.J.

Professor

Lynch School of Education

Boston College

Chestnut Hill, Massachusetts

W. James Popham

Professor Emeritus

University of California, Los Angeles

Wilsonville, Oregon

**B. Fielding Rolston** 

Chairman

Tennessee Board of Education

Kingsport, Tennessee

Linda Rosen

CEO

Change the Equation

Washington, DC

Cary Sneider

Associate Research Professor

Portland State University

Portland, Oregon

Ken Wagner

Commissioner for Elementary and

Secondary Education

Rhode Island Department of Education

Providence, Rhode Island

**Chasidy White** 

Eighth-Grade Teacher Brookwood Middle School

Brookwood, Alabama

Joe Willhoft

Consultant

Tacoma, Washington

Sue Betka (Ex officio)

Acting Director

Institute of Education Sciences

U.S. Department of Education

Washington, D.C.

Cornelia S. Orr

Executive Director

National Assessment Governing Board

Washington, D.C.