



NORTH DAKOTA

Sciences & Life Sciences Achievement

STUDENT ACHIEVEMENT

NAEP Grade 8	ND	U.S. Avg.	State Rank
Science Average, 2005	163.2	147.1	1
Science, 2005 (% at or above "proficient")	43.0%	27.3%	1
Life Sciences Average, 2005	163.4	148.2	1

ACT	ND	U.S. Avg.	State Rank
Science Average, 2008	21.5	20.8	20
Biology, 2008 (% of students ready for college level)	31%	28%	24

AP	ND	U.S. Avg.	State Rank
Science Scores, 2008 (% with a score of 3 or higher)	51.4%	55.4%	34
Science Exams, 2008 (Exams as % of all H.S. grads)	3.9%	10.5%	49
Biology Scores, 2008 (% with a score of 3 or higher)	43.4%	49.8%	39
Biology Exams, 2008 (Exams as % of all H.S. grads)	2.1%	4.6%	48

SCIENCE TEACHER QUALITY and PROFESSIONAL DEVELOPMENT	ND	U.S. Avg.	State Rank
Science Teachers with Major in Assigned Field, 2003–04 (% , Grades 7–12)	71%	77%	35
Science Teachers Certified, 2006 (% , Grades 7–8)	89%	N/A%	10
Biology Teachers Certified, 2006 (% , Grades 9–12)	100%	88%	1

Note: NAEP = National Assessment of Educational Progress, AP = Advanced Placement
N/A = Data not available.

Examples of Bioscience Education Activities

Teacher Preparation and Professional Development

The **Graduate Student University School (GraSUS-II)** project funded by the National Science Foundation at the North Dakota State University places undergraduate and graduate students in schools in the Fargo-Moorhead area to work with science and math teachers to

ND STATE SCIENCE STANDARDS & REQUIREMENTS

STANDARDS PROFILE

- Current draft (2004) K-12 standards include exploration of how emerging technologies (including genetics) may impact science and society

BIOSCIENCE-RELATED GRADUATION REQUIREMENTS:

Local determination is made district by district



implement curricular projects, including some with bioscience content.

Career and Technical Education

The state sponsors a 6-week education/training module on DNA and Genetics and another on “Fast Plants” that rotate among schools to supplement agricultural and science instruction.



Basic Skills Achievement and Other Summary Metrics

STUDENT ACHIEVEMENT

NAEP Grade 8	ND	U.S. Avg.	State Rank
Math Average, 2007	291.6	280.2	3
Math, 2007 (% at or above "proficient")	41.0%	31.0%	4
Reading Average, 2007	268.0	261.0	9
Reading, 2007 (% at or above "proficient")	32.2%	29.2%	23
Writing Average, 2007	153.8	154.3	25
Writing, 2007 (% at or above "proficient")	26.7%	30.6%	30

ACT	ND	U.S. Avg.	State Rank
Percentage of Graduates Tested	81%	43%	7
Math Average, 2008	21.6	21.0	26
Reading Average, 2008	21.8	21.4	28
English Average, 2008	20.7	20.6	30

SAT	ND	U.S. Avg.	State Rank
Percentage of Graduates Tested	4%	48%	48
Math Average, 2008	604	515	3
Critical Reading Average, 2008	594	502	4
Writing Average, 2008	568	494	8

AP	ND	U.S. Avg.	State Rank
Math Scores, 2008 (% with a score of 3 or higher)	79.4%	65.2%	2
Math Exams, 2008 (Exams as % of all H.S. grads)	3.4%	8.7%	49
English Scores, 2008 (% with a score of 3 or higher)	58.6%	59.2%	34
English Exams, 2008 (Exams as % of all H.S. grads)	6.7%	18.9%	51

SUMMARY STATE EDUCATION METRICS

Selected Indicators	ND	U.S. Avg.	State Rank
High School Graduation Rate, 2005–06	82.2%	73.4%	9
Student/Teacher Ratio, 2006–07	12.1	15.5	4*
Low-income Students, 2006–07 (% of all students)	30.3%	41.6%	–
Expenditure per Student (\$), 2005–06	\$8,728	\$9,154	25

Note: NAEP = National Assessment of Educational Progress, AP = Advanced Placement
 N/A = Data not available. * Lowest value receives highest ranking.

TABLE SOURCE NOTES:

NAEP Assessments, grade 8: U.S. Department of Education, Institute of Education Sciences, National Center for Education Statistics (NCES), National Assessment of Educational Progress (NAEP), 2005; **ACT Exam:** ACT, Inc., 2008; **SAT Reasoning Test:** The College Board, 2008.

Advanced Placement (AP): Battelle analysis of data from the College Board, 2008; AP test takers as a share of high school graduates includes graduate data from U.S. Department of Education, NCES for both public (Common Core of Data) and private high schools (Private School Survey).

Science Teacher Indicators: Council of Chief State School Officers (CCSSO) analysis of State Departments of Education data on public schools, 2007; U.S. Department of Education, NCES Schools and Staffing Survey, 2003–04 as reported by CCSSO, 2007.

Summary State Education Metrics: U.S. Department of Education, National Center for Education Statistics (NCES), Common Core of Data (CCD) on public elementary and secondary education.

Note: High school graduation rates are averaged freshman graduation rates—the rate is the number of graduates divided by the estimated count of freshmen 4 years earlier. U.S. figure for share of students eligible for free or reduced-price school lunch (“low-income” students) is available for 2005–06 only (state data are for 2006–07).

