#### Other information collected by TIMSS

TIMSS is more than an assessment of student knowledge in mathematics and science. TIMSS also considers the context in which learning occurs. Students, teachers, and schools are asked about a variety of aspects of the environments in which content is taught, learned, practiced, and applied. In this way, TIMSS provides each country with a rich source of information on the factors influencing mathematics and science achievement.

## Participating countries and other education systems in TIMSS 2015

North and	Netherlands	Kazakhstan
South America	Northern Ireland	Korea, Rep. of
Canada	Norway	Kuwait
Chile	Poland	Lebanon
United States	Portugal	Malaysia
Europe	Russian Federation	Oman
Austria	Slovak Republic	Palestinian
Belgium (Flemish)	Slovenia	Nat'l Auth.
Bulgaria	Spain	Qatar
Croatia	Sweden	Saudi Arabia
Cyprus	Turkey	Singapore
Czech Republic	Ukraine	Thailand
Denmark	Asia and	United Arab
	Asia and Middle East	United Arab Emirates
Denmark		
Denmark England	Middle East	Emirates
Denmark England Finland	Middle East Armenia	Emirates  Africa  Botswana
Denmark England Finland France	Middle East Armenia Bahrain	Emirates  Africa
Denmark England Finland France Georgia	Middle East Armenia Bahrain Chinese Taipei	Emirates  Africa  Botswana  Egypt  South Africa
Denmark England Finland France Georgia Germany	Middle East Armenia Bahrain Chinese Taipei Hong Kong SAR	Emirates  Africa  Botswana Egypt South Africa  Oceania
Denmark England Finland France Georgia Germany Hungary	Middle East Armenia Bahrain Chinese Taipei Hong Kong SAR Iran, Islamic	Emirates  Africa  Botswana  Egypt  South Africa

### **Benchmarking participants**

Malta

Abu Dhabi, UAE
Alberta, Canada
Buenos Aires, Argentina

Dubai, UAE
Ontario, Canada
Quebec, Canada

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NCES is authorized to conduct TIMSS under the Education Sciences Reform Act of 2002 (ESRA 2002), 20 U.S. Code, § 9543. Information collected will help the U.S. Department of Education's ongoing efforts to benchmark student achievement in the United States. Participation is voluntary. By law, data collected may be used only for statistical purposes and may not be disclosed, or used, in identifiable form for any other purpose except as required by law (20 U.S. Code, § 9573). The U.S. Office of Management and Budget has approved the data collection under OMB # 1850-0695. Individual responses will be combined with those from other participants to produce summary statistics and reports.



For questions about TIMSS 2015, contact the toll-free TIMSS information hotline at 855-445-5604 or email TIMSS@westat.com.

Institute of Education Sciences

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Trends in International Mathematics and Science Study (TIMSS)

2015





#### What is TIMSS?

The Trends in International Mathematics and Science Study (TIMSS) is an international assessment and research project designed to measure trends in mathematics and science achievement at the fourth- and eighth-grade levels as well as collect information about school and teacher practices related to instruction. Since 1995, TIMSS has been administered every 4 years. TIMSS 2015, the sixth study in the series, will involve students from more than 50 countries, including the United States.

TIMSS is sponsored by the International Association for the Evaluation of Educational Achievement (IEA) and managed in the United States by the National Center for Education Statistics (NCES), part of the U.S. Department of Education.

## Why is TIMSS important?

TIMSS provides a unique opportunity to compare U.S. students' math and science knowledge and skills at the fourth- and eighth-grade levels with that of their peers in countries around the world. TIMSS complements what we learn from national assessments by identifying the strengths and weaknesses of student performance relative to students around the world. The results inform national discussions about education as well as international competitiveness.

TIMSS provides valuable benchmark information on how U.S. students compare to students around the world, allows educators and policymakers to examine other educational systems for practices that could have application to the United States, and contributes to ongoing discussions of ways to improve the quality of education of all students.

# What type of assessment is TIMSS?

The TIMSS mathematics and science assessment is developed through an international consensus-building process involving input from U.S. and international experts in mathematics, science, and measurement. In a final step, the assessment

is endorsed as suitable by all participating countries. The assessment contains a mix of questions; some require students to select appropriate responses while others require that students solve problems and provide written answers. Examples of released TIMSS items are available at http://nces.ed.gov/timss/educators.asp.

## **Key findings from TIMSS 2011**

#### **Mathematics**

- At grade 4, the U.S. average mathematics score (541) was higher than the TIMSS scale average of 500. The United States was among the top 15 education systems (8 education systems had higher averages and 6 were not measurably different) and scored higher, on average, than 42 education systems. The U.S. mathematics average at grade 4 rose 12 points between 2007 and 2011. The United States was one of 12 education systems that increased its average score during this time period.
- At grade 8, the U.S. mathematics score (509) was higher than the TIMSS scale average of 500. The United States was among the top 24 education systems in mathematics (11 education systems had higher averages and 12 were not measurably different) and scored higher, on average, than 32 education systems. The U.S. mathematics average score at grade 8 was not measurably different than in 2007.

#### **Science**

- At grade 4, the U.S. average science score (544) was higher than the TIMSS scale average of 500. The United States was among the top 10 education systems (6 education systems had higher averages and 3 were not measurably different) and scored higher, on average, than 47 education systems. The U.S. science average score at grade 4 was not measurably different than in 2007.
- At grade 8, the U.S. average science score (525) was higher than the TIMSS scale average of 500. The United States was among the top 23 education systems (12 education systems had higher averages and 10 were not measurably different) and scored higher, on average, than 33 education systems. The U.S. science average score at grade 8 was not measurably different than in 2007.