

## International Assessments

*At grade 4, the United States was among the top 15 and 10 participating education systems, respectively, in mathematics and science. At grade 8, the United States was among the top 24 and 23 participating education systems, respectively, in mathematics and science.*

The United States participates in several international assessments that allow for cross-national comparisons of subject matter results, including the Trends in International Mathematics and Science Study (TIMSS) and the Progress in International Reading Literacy Study (PIRLS). Both assessments are coordinated by the TIMSS & PIRLS International Study Center at Boston College, under the auspices of the International Association for the Evaluation of Educational Achievement (IEA), an international organization of national research institutions and governmental research agencies. TIMSS assesses mathematics and science knowledge and skills at grades 4 and 8, and PIRLS assesses reading literacy at grade 4.

In 2011, there were 57 education systems that had TIMSS mathematics and science data at grade 4 and 56 education systems that had these data at grade 8. Education systems

include countries (complete, independent, and political entities) and other benchmarking education systems (portions of a country, nation, kingdom, or emirate, or other non-national entities). These benchmarking systems are able to participate in TIMSS even though they may not be members of the IEA. Participating allows them the opportunity to assess their students' achievement and to view their curricula in an international context. In addition to participating in the U.S. national sample, several U.S. states participated individually and are included as education systems. At the 4th-grade level, two U.S. states (Florida-USA and North Carolina-USA) participated; at the 8th-grade level, nine U.S. states (Alabama-USA, California-USA, Colorado-USA, Connecticut-USA, Florida-USA, Indiana-USA, Massachusetts-USA, Minnesota-USA, and North Carolina-USA) participated.

**Table 1. Average TIMSS mathematics assessment scale scores of 4th-grade students, by education system: 2011**

Grade 4		Grade 4	
Education system	Average score	Education system	Average score
TIMSS scale average	500	New Zealand	486 ▼
Singapore <sup>1</sup>	606 ▲	Spain	482 ▼
Korea, Rep. of	605 ▲	Romania	482 ▼
<i>Hong Kong-CHN<sup>1</sup></i>	602 ▲	Poland	481 ▼
<i>Chinese Taipei-CHN</i>	591 ▲	Turkey	469 ▼
Japan	585 ▲	Azerbaijan <sup>1,5</sup>	463 ▼
<i>Northern Ireland-GBR<sup>2</sup></i>	562 ▲	Chile	462 ▼
<i>Belgium (Flemish)-BEL</i>	549 ▲	Thailand	458 ▼
Finland	545	Armenia	452 ▼
<i>England-GBR</i>	542	Georgia <sup>3,5</sup>	450 ▼
Russian Federation	542	Bahrain	436 ▼
<b>United States<sup>1</sup></b>	<b>541</b>	United Arab Emirates	434 ▼
Netherlands <sup>2</sup>	540	Iran, Islamic Rep. of	431 ▼
Denmark <sup>1</sup>	537	Qatar <sup>1</sup>	413 ▼
Lithuania <sup>1,3</sup>	534 ▼	Saudi Arabia	410 ▼
Portugal	532 ▼	Oman <sup>6</sup>	385 ▼
Germany	528 ▼	Tunisia <sup>6</sup>	359 ▼
Ireland	527 ▼	Kuwait <sup>3,7</sup>	342 ▼
Serbia <sup>1</sup>	516 ▼	Morocco <sup>7</sup>	335 ▼
Australia	516 ▼	Yemen <sup>7</sup>	248 ▼
Hungary	515 ▼		
Slovenia	513 ▼	<b>Benchmarking</b>	
Czech Republic	511 ▼	<b>education systems</b>	
Austria	508 ▼	<i>North Carolina-USA<sup>1,3</sup></i>	554 ▲
Italy	508 ▼	<i>Florida-USA<sup>3,8</sup></i>	545
Slovak Republic	507 ▼	<i>Quebec-CAN</i>	533 ▼
Sweden	504 ▼	<i>Ontario-CAN</i>	518 ▼
Kazakhstan <sup>1</sup>	501 ▼	<i>Alberta-CAN<sup>1</sup></i>	507 ▼
Malta	496 ▼	<i>Dubai-UAE</i>	468 ▼
Norway <sup>4</sup>	495 ▼	<i>Abu Dhabi-UAE</i>	417 ▼
Croatia <sup>1</sup>	490 ▼		

▲ Average score is higher than U.S. average score.

▼ Average score is lower than U.S. average score.

<sup>1</sup> National Defined Population covers 90 to 95 percent of National Target Population defined by TIMSS.

<sup>2</sup> Met guidelines for sample participation rates only after replacement schools were included.

<sup>3</sup> National Target Population does not include all of the International Target Population defined by TIMSS.

<sup>4</sup> Nearly satisfied guidelines for sample participation rates after replacement schools were included.

<sup>5</sup> Exclusion rates for Azerbaijan and Georgia are slightly underestimated as some conflict zones were not covered and no official statistics were available.

<sup>6</sup> The TIMSS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 15 percent, though it is less than 25 percent.

<sup>7</sup> The TIMSS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 25 percent.

<sup>8</sup> National Defined Population covers less than 90 percent, but at least 77 percent, of National Target Population defined by TIMSS.

NOTE: Education systems are ordered by 2011 average score. Italics indicate participants identified and counted in this report as an education system and not as a separate country. Trends in International Mathematics and Science Study (TIMSS) scores are reported on a scale from 0 to 1,000, with the scale average set at 500 and the standard deviation set at 100. The TIMSS average includes only education systems that are members of the International Association for the Evaluation of Educational Achievement (IEA), which develops and implements TIMSS at the international level. "Benchmarking" education systems are not members of the IEA and are therefore not included in the average. All U.S. state data are based on public school students only.

SOURCE: Provasnik, S., Kastberg, D., Ferraro, D., Lemanski, N., Roey, S., and Jenkins, F. (2012). *Highlights From TIMSS 2011: Mathematics and Science Achievement of U.S. Fourth- and Eighth-Grade Students in an International Context* (NCES 2013-009), table 3, data from the International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2011. See *Digest of Education Statistics 2012*, table 460.

At grade 4, the U.S. average mathematics score (541) in 2011 was higher than the TIMSS scale average (500). The United States was among the top 15 education systems in mathematics (8 education systems had higher average scores, and 6 had scores that were not measurably different), and the United States scored higher, on average, than 42 education systems. Seven education systems with average mathematics scores above the U.S. score were Belgium (Flemish)-BEL, Chinese

Taipei-CHN, Hong Kong-CHN, Japan, Northern Ireland-GBR, the Republic of Korea, and Singapore. Among the U.S. states that participated at grade 4, both North Carolina-USA and Florida-USA had average mathematics scores above the TIMSS scale average. North Carolina-USA's score was higher than the U.S. national average; however, Florida-USA's score was not measurably different from the U.S. national average in mathematics.

For more information, see the Reader's Guide and the Guide to Sources.

**Table 2. Average TIMSS science assessment scale scores of 4th-grade students, by education system: 2011**

Grade 4		Grade 4	
Education system	Average score	Education system	Average score
TIMSS scale average	500	New Zealand	497 ▼
Korea, Rep. of	587 ▲	Kazakhstan <sup>1</sup>	495 ▼
Singapore <sup>1</sup>	583 ▲	Norway <sup>4</sup>	494 ▼
Finland	570 ▲	Chile	480 ▼
Japan	559 ▲	Thailand	472 ▼
Russian Federation	552 ▲	Turkey	463 ▼
Chinese Taipei-CHN	552 ▲	Georgia <sup>3,5</sup>	455 ▼
United States <sup>1</sup>	544	Iran, Islamic Rep. of	453 ▼
Czech Republic	536 ▼	Bahrain	449 ▼
Hong Kong-CHN <sup>1</sup>	535 ▼	Malta	446 ▼
Hungary	534 ▼	Azerbaijan <sup>1,5</sup>	438 ▼
Sweden	533 ▼	Saudi Arabia	429 ▼
Slovak Republic	532 ▼	United Arab Emirates	428 ▼
Austria	532 ▼	Armenia	416 ▼
Netherlands <sup>2</sup>	531 ▼	Qatar <sup>1</sup>	394 ▼
England-GBR	529 ▼	Oman	377 ▼
Denmark <sup>1</sup>	528 ▼	Kuwait <sup>3,6</sup>	347 ▼
Germany	528 ▼	Tunisia <sup>6</sup>	346 ▼
Italy	524 ▼	Morocco <sup>7</sup>	264 ▼
Portugal	522 ▼	Yemen <sup>7</sup>	209 ▼
Slovenia	520 ▼		
Northern Ireland-GBR <sup>2</sup>	517 ▼	<b>Benchmarking education systems</b>	
Ireland	516 ▼	<i>Florida-USA<sup>3,8</sup></i>	545
Croatia <sup>1</sup>	516 ▼	<i>Alberta-CAN<sup>1</sup></i>	541
Australia	516 ▼	<i>North Carolina-USA<sup>1,3</sup></i>	538
Serbia <sup>1</sup>	516 ▼	<i>Ontario-CAN</i>	528 ▼
Lithuania <sup>1,3</sup>	515 ▼	<i>Quebec-CAN</i>	516 ▼
Belgium (Flemish)-BEL	509 ▼	<i>Dubai-UAE</i>	461 ▼
Romania	505 ▼	<i>Abu Dhabi-UAE</i>	411 ▼
Spain	505 ▼		
Poland	505 ▼		

▲ Average score is higher than U.S. average score.

▼ Average score is lower than U.S. average score.

<sup>1</sup> National Defined Population covers 90 to 95 percent of National Target Population defined by TIMSS.

<sup>2</sup> Met guidelines for sample participation rates only after replacement schools were included.

<sup>3</sup> National Target Population does not include all of the International Target Population defined by TIMSS.

<sup>4</sup> Nearly satisfied guidelines for sample participation rates after replacement schools were included.

<sup>5</sup> Exclusion rates for Azerbaijan and Georgia are slightly underestimated as some conflict zones were not covered and no official statistics were available.

<sup>6</sup> The TIMSS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 15 percent, though it is less than 25 percent.

<sup>7</sup> The TIMSS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 25 percent.

<sup>8</sup> National Defined Population covers less than 90 percent, but at least 77 percent, of National Target Population defined by TIMSS.

NOTE: Education systems are ordered by 2011 average score. Italics indicate participants identified and counted in this report as an education system and not as a separate country. Trends in International Mathematics and Science Study (TIMSS) scores are reported on a scale from 0 to 1,000, with the scale average set at 500 and the standard deviation set at 100. The TIMSS average includes only education systems that are members of the International Association for the Evaluation of Educational Achievement (IEA), which develops and implements TIMSS at the international level. "Benchmarking" education systems are not members of the IEA and are therefore not included in the average. All U.S. state data are based on public school students only.

SOURCE: Provasnik, S., Kastberg, D., Ferraro, D., Lemanski, N., Roey, S., and Jenkins, F. (2012). *Highlights From TIMSS 2011: Mathematics and Science Achievement of U.S. Fourth- and Eighth-Grade Students in an International Context* (NCES 2013-009), table 26, data from the International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2011. See *Digest of Education Statistics 2012*, table 460.

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 in science (6 education systems had higher average science scores, and 3 had scores that were not measurably different). The United States also scored higher, on average, than 47 education systems in 2011. The six education systems

with average science scores above the U.S. score were Chinese Taipei-CHN, Finland, Japan, the Republic of Korea, the Russian Federation, and Singapore. Of the participating education systems within the United States, both Florida-USA and North Carolina-USA scored above the TIMSS scale average, but their science scores were not measurably different from the U.S. national average.



Table 4. Average TIMSS science assessment scale scores of 8th-grade students, by education system: 2011

Grade 8		Grade 8	
Education system	Average score	Education system	Average score
TIMSS scale average	500	Saudi Arabia	436 ▼
Singapore <sup>1</sup>	590 ▲	Malaysia	426 ▼
<i>Chinese Taipei-CHN</i>	564 ▲	Syrian Arab Republic	426 ▼
Korea, Rep. of	560 ▲	<i>Palestinian Nat'l Auth.</i>	420 ▼
Japan	558 ▲	Georgia <sup>4,5</sup>	420 ▼
Finland	552 ▲	Oman	420 ▼
Slovenia	543 ▲	Qatar	419 ▼
Russian Federation <sup>1</sup>	542 ▲	Macedonia, Rep. of	407 ▼
<i>Hong Kong-CHN</i>	535 ▲	Lebanon	406 ▼
<i>England-GBR<sup>2</sup></i>	533	Indonesia	406 ▼
<b>United States<sup>1</sup></b>	<b>525</b>	Morocco	376 ▼
Hungary	522	Ghana <sup>6</sup>	306 ▼
Australia	519		
Israel <sup>3</sup>	516		
Lithuania <sup>4</sup>	514 ▼	<b>Benchmarking education systems</b>	
New Zealand	512 ▼	<i>Massachusetts-USA<sup>1,4</sup></i>	567 ▲
Sweden	509 ▼	<i>Minnesota-USA<sup>4</sup></i>	553 ▲
Italy	501 ▼	<i>Alberta-CAN<sup>1</sup></i>	546 ▲
Ukraine	501 ▼	<i>Colorado-USA<sup>4</sup></i>	542 ▲
Norway	494 ▼	<i>Indiana-USA<sup>1,4</sup></i>	533
Kazakhstan	490 ▼	<i>Connecticut-USA<sup>1,4</sup></i>	532
Turkey	483 ▼	<i>North Carolina-USA<sup>3,4</sup></i>	532
Iran, Islamic Rep. of	474 ▼	<i>Florida-USA<sup>1,4</sup></i>	530
Romania	465 ▼	<i>Ontario-CAN<sup>1</sup></i>	521
United Arab Emirates	465 ▼	<i>Quebec-CAN</i>	520
Chile	461 ▼	<i>California-USA<sup>1,4</sup></i>	499 ▼
Bahrain	452 ▼	<i>Alabama-USA<sup>4</sup></i>	485 ▼
Thailand	451 ▼	<i>Dubai-UAE</i>	485 ▼
Jordan	449 ▼	<i>Abu Dhabi-UAE</i>	461 ▼
Tunisia	439 ▼		
Armenia	437 ▼		

▲ Average score is higher than U.S. average score.

▼ Average score is lower than U.S. average score.

<sup>1</sup> National Defined Population covers 90 to 95 percent of National Target Population defined by TIMSS.

<sup>2</sup> Nearly satisfied guidelines for sample participation rates after replacement schools were included.

<sup>3</sup> National Defined Population covers less than 90 percent, but at least 77 percent, of National Target Population defined by TIMSS.

<sup>4</sup> National Target Population does not include all of the International Target Population defined by TIMSS.

<sup>5</sup> Exclusion rates for Georgia are slightly underestimated as some conflict zones were not covered and no official statistics were available.

<sup>6</sup> The TIMSS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 15 percent, though it is less than 25 percent.

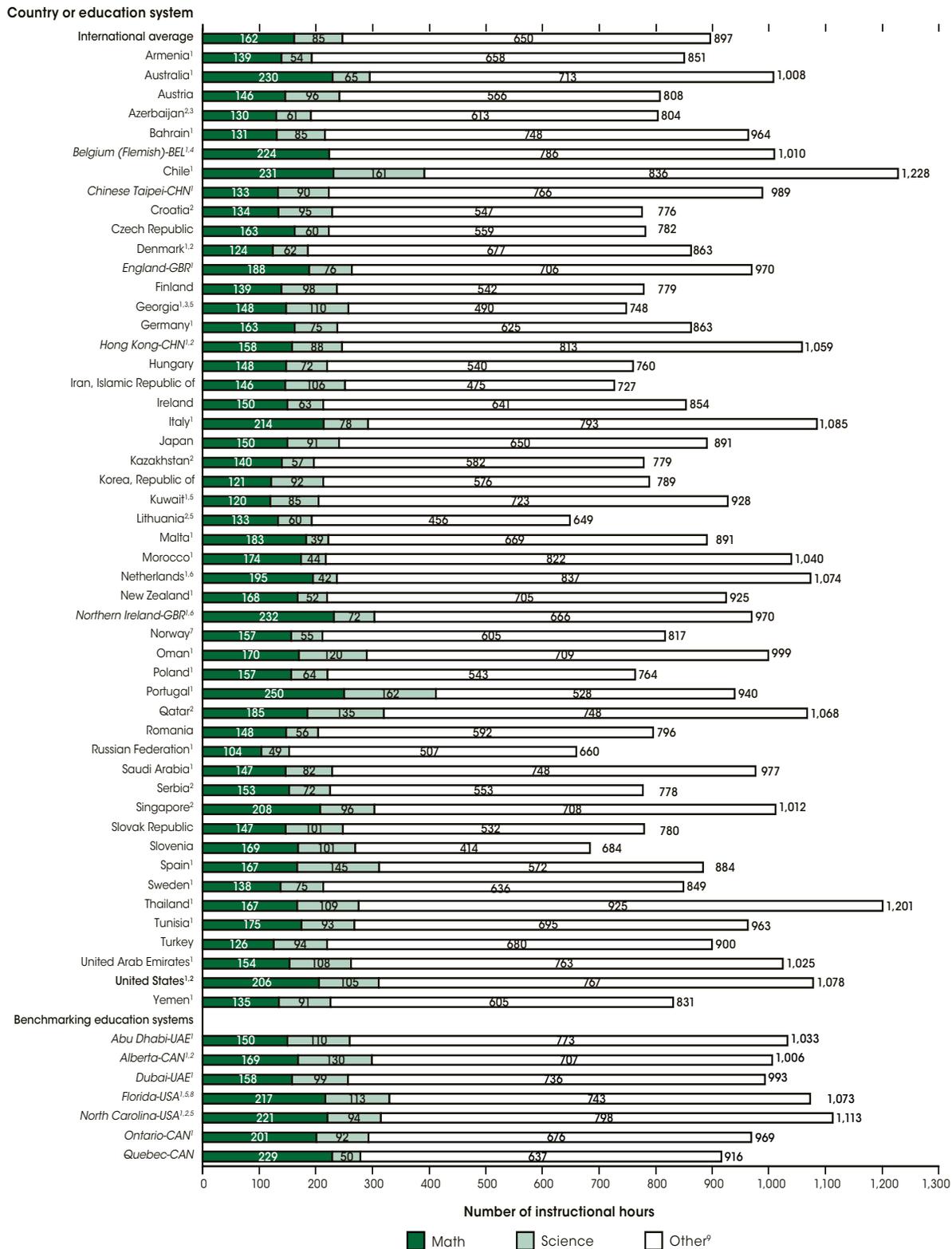
NOTE: Education systems are ordered by 2011 average score. Italics indicate participants identified and counted in this report as an education system and not as a separate country. Trends in International Mathematics and Science Study (TIMSS) scores are reported on a scale from 0 to 1,000, with the scale average set at 500 and the standard deviation set at 100. The TIMSS average includes only education systems that are members of the International Association for the Evaluation of Educational Achievement (IEA), which develops and implements TIMSS at the international level. "Benchmarking" education systems are not members of the IEA and are therefore not included in the average. All U.S. state data are based on public school students only.

SOURCE: Provasnik, S., Kastberg, D., Ferraro, D., Lemanski, N., Roey, S., and Jenkins, F. (2012). *Highlights From TIMSS 2011: Mathematics and Science Achievement of U.S. Fourth- and Eighth-Grade Students in an International Context* (NCES 2013-009), table 27, data from the International Association for the Evaluation of Educational Achievement (IEA), Trends in International Mathematics and Science Study (TIMSS), 2011. See *Digest of Education Statistics 2012*, table 461.

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 in science in 2011 (12 education systems had higher average scores, and 10 had scores that were not measurably different). The United States scored higher, on average, than 33 education systems. The 12 education systems with average science scores above the U.S. score were Alberta-CAN, Chinese Taipei-CHN, Finland, Hong Kong-CHN, Japan, the Republic of Korea, the Russian Federation, Singapore, Slovenia, and, within the United States, Colorado-USA, Massachusetts-USA, and Minnesota-USA.

Aside from scoring above the U.S. average in 8th-grade science, Colorado-USA, Massachusetts-USA, and Minnesota-USA also scored above the TIMSS scale average of 500. Connecticut-USA, Florida-USA, Indiana-USA, and North Carolina-USA scored above the TIMSS scale average, but their scores were not measurably different from the U.S. national average. California-USA's score was not measurably different from the TIMSS scale average, but it was below the U.S. national average; Alabama-USA scored below both the TIMSS scale average and the U.S. national average in science.

Figure 1. Number of instructional hours per year for 4th-grade students, by country or education system and subject: 2011



See notes on next page.

For more information, see the Reader's Guide and the Guide to Sources.

<sup>1</sup> Data for number of math, science, and/or total instructional hours are available for at least 50 percent but less than 85 percent of students.

<sup>2</sup> National Defined Population covers 90 to 95 percent of National Target Population defined by TIMSS.

<sup>3</sup> Exclusion rates for Azerbaijan and Georgia are slightly underestimated as some conflict zones were not covered and no official statistics were available.

<sup>4</sup> Data for instructional hours in science are not available. Other instructional hours calculated by subtracting instruction hours in mathematics from total instructional hours.

<sup>5</sup> National Target Population does not include all of the International Target Population defined by TIMSS.

<sup>6</sup> Met guidelines for sample participation rates only after replacement schools were included.

<sup>7</sup> Nearly satisfied guidelines for sample participation rates only after replacement schools were included.

<sup>8</sup> National Defined Population covers less than 90 percent, but at least 77 percent, of National Target Population defined by TIMSS.

<sup>9</sup> Other instructional hours calculated by adding instructional hours in mathematics to instructional hours in science and then subtracting from total instructional hours.

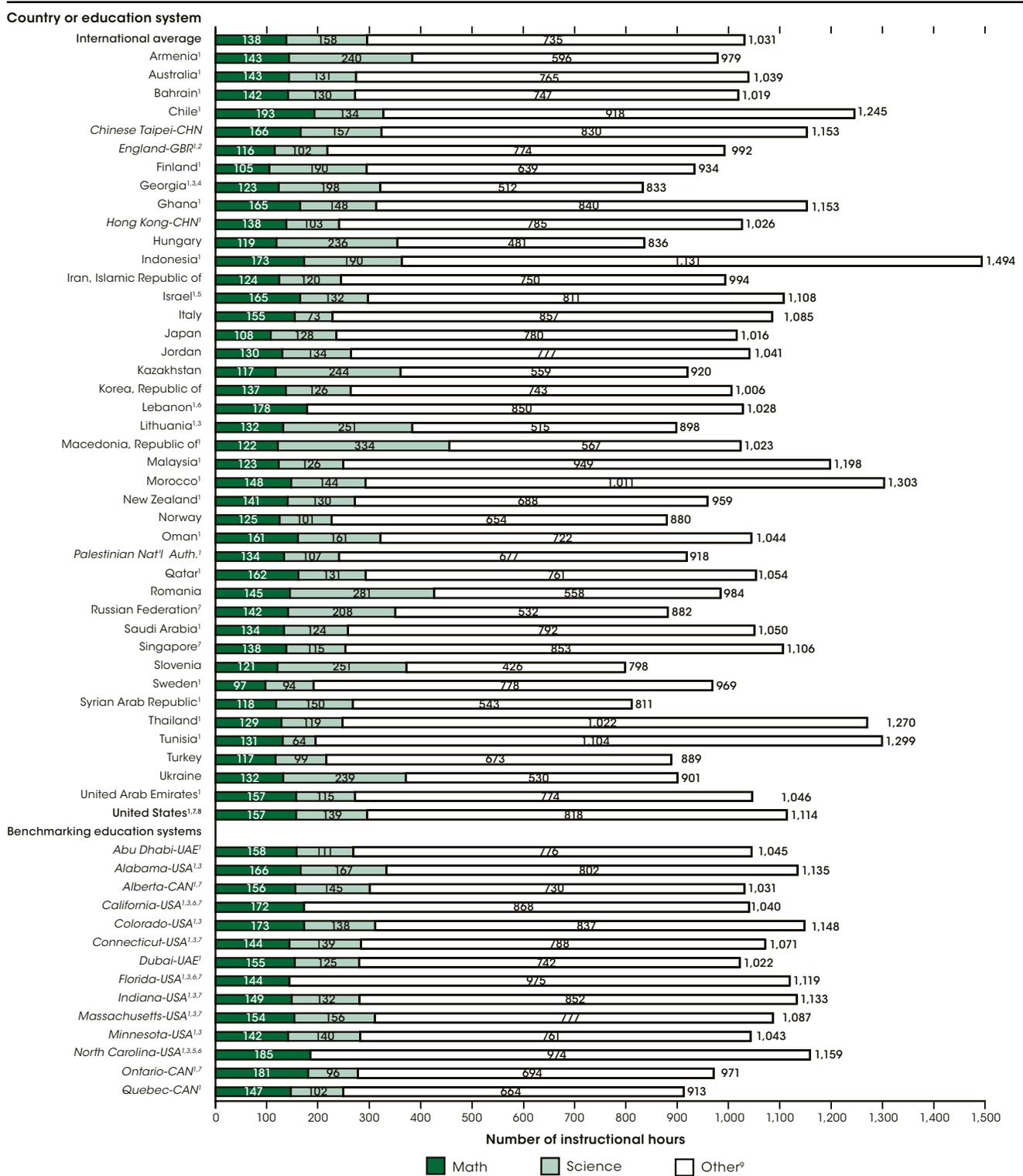
NOTE: Italics indicate participants identified and counted in this report as an education system and not as a separate country. Instructional times shown in this figure are actual or implemented times (as opposed to intended times prescribed by the curriculum). Principals reported total instructional hours per day and school days per year. Total instructional hours per year were calculated by multiplying the number of school days per year by the number of instructional hours per day. Teachers reported instructional hours per week in mathematics and science. Instructional hours per year in mathematics and science were calculated by dividing weekly instructional hours by the number of school days per week and then multiplying by the number of school days per year. International average instructional hours includes only education systems that are members of the International Association for the Evaluation of Educational Achievement (IEA), which develops and implements TIMSS at the international level. "Benchmarking" education systems are not members of the IEA and are therefore not included in the average. All U.S. state data are based on public school students only.

SOURCE: Mullis, I.V.S., Martin, M.O., Foy, P., and Arora, A. (2012). *TIMSS 2011 International Results in Mathematics*, exhibit 8.6, and Martin, M.O., Mullis, I.V.S., Foy, P., and Stanco, G.M. (2012). *TIMSS 2011 International Results in Science*, exhibit 8.6. See *Digest of Education Statistics 2012*, table 460.

In addition to assessing achievement in mathematics and science, TIMSS collects information from principals on the total number of annual instructional hours in school. TIMSS also collects information from teachers on the number of annual instructional hours spent on mathematics and science instruction at grades 4 and 8. In 2011, education systems (excluding the benchmarking participants) participating in TIMSS at grade 4 spent an average of 897 total hours on instructional time, of which an average of 162 hours (18 percent) were spent on

mathematics instruction and 85 hours (10 percent) were spent on science instruction. In 2011, the average number of total instructional hours (1,078 hours) spent in the United States at grade 4 was higher than the international average (897 hours). The average numbers of instructional hours spent on grade 4 mathematics instruction (206 hours) and science instruction (105 hours) in the United States were also higher than the international averages (162 and 85 hours, respectively).

Figure 2. Number of instructional hours per year for 8th-grade students, by country or education system and subject: 2011



See notes on next page.

For more information, see the Reader's Guide and the Guide to Sources.

<sup>1</sup> Data for number of math and/or science instructional hours are available for at least 50 percent but less than 85 percent of students.

<sup>2</sup> Nearly satisfied guidelines for sample participation rate after replacement schools were included.

<sup>3</sup> National Target Population does not include all of the International Target Population defined by TIMSS.

<sup>4</sup> Exclusion rates for Georgia are slightly underestimated as some conflict zones were not covered and no official statistics were available.

<sup>5</sup> National Defined Population covers less than 90 percent, but at least 77 percent, of National Target Population defined by TIMSS.

<sup>6</sup> Data for instructional hours in science were not available. Other instructional hours calculated by subtracting instruction hours in mathematics from total instructional hours.

<sup>7</sup> National Defined Population covers 90 to 95 percent of National Target Population defined by TIMSS.

<sup>8</sup> Data for science are for 2007 and are from TIMSS 2007 International Results in Science. Met guidelines for sample participation rates only after substitute schools were included. Data for number of math instructional hours are available for at least 50 percent but less than 70 percent of students.

<sup>9</sup> Other instructional hours calculated by adding instructional hours in mathematics to instructional hours in science and then subtracting from total instructional hours.

NOTE: Instructional times shown in this figure are actual or implemented times (as opposed to intended times prescribed by the curriculum). Principals reported total instructional hours per day and school days per year. Total instructional hours per year were calculated by multiplying the number of school days per year by the number of instructional hours per day. Teachers reported instructional hours per week in mathematics and science. Instructional hours per year in mathematics and science were calculated by dividing weekly instructional hours by the number of school days per week and then multiplying by the number of school days per year. International average instructional hours includes only education systems that are members of the International Association for the Evaluation of Educational Achievement (IEA), which develops and implements TIMSS at the international level. "Benchmarking" education systems are not members of the IEA and are therefore not included in the average. All U.S. state data are based on public school students only.

SOURCE: Mullis, I.V.S., Martin, M.O., Foy, P., and Arora, A. (2012). *TIMSS 2011 International Results in Mathematics*, exhibit 8.7, and Martin, M.O., Mullis, I.V.S., Foy, P., and Stanco, G.M. (2012). *TIMSS 2011 International Results in Science*, exhibit 8.7. See *Digest of Education Statistics 2012*, table 461.

At grade 8, education systems (excluding the benchmarking participants) participating in TIMSS spent an average of 1,031 total annual hours on instructional time in 2011, of which 138 hours (14 percent) were spent on mathematics instruction and 158 hours (11 percent) were spent on science instruction. Similar to the findings

at grade 4, the United States' average number of total instructional hours at grade 8 (1,114 hours) was higher than the international average (1,031 hours). The average hours spent on grade 8 mathematics instruction (157 hours) in the United States was also higher than the international average (138 hours).

**Table 5. Average PIRLS reading literacy assessment scale scores of 4th-grade students, by education system: 2011**

Education system	Overall reading average scale score	Education system	Overall reading average scale score
PIRLS scale average	500	PIRLS scale average	500
<i>Hong Kong-CHN</i> <sup>1</sup>	571 ▲	France	520 ▼
Russian Federation	568 ▲	Spain	513 ▼
Finland	568 ▲	Norway <sup>5</sup>	507 ▼
Singapore <sup>2</sup>	567 ▲	<i>Belgium (French)-BEL</i> <sup>2,3</sup>	506 ▼
<i>Northern Ireland-GBR</i> <sup>3</sup>	558	Romania	502 ▼
<b>United States<sup>2</sup></b>	<b>556</b>	Georgia <sup>4,6</sup>	488 ▼
Denmark <sup>2</sup>	554	Malta	477 ▼
Croatia <sup>2</sup>	553	Trinidad and Tobago	471 ▼
<i>Chinese Taipei-CHN</i>	553	Azerbaijan <sup>2,6</sup>	462 ▼
Ireland	552	Iran, Islamic Rep. of	457 ▼
<i>England-GBR</i> <sup>3</sup>	552	Colombia	448 ▼
Canada <sup>2</sup>	548 ▼	United Arab Emirates	439 ▼
Netherlands <sup>3</sup>	546 ▼	Saudi Arabia	430 ▼
Czech Republic	545 ▼	Indonesia	428 ▼
Sweden	542 ▼	Qatar <sup>2</sup>	425 ▼
Italy	541 ▼	Oman <sup>7</sup>	391 ▼
Germany	541 ▼	Morocco <sup>8</sup>	310 ▼
Israel <sup>1</sup>	541 ▼		
Portugal	541 ▼		
Hungary	539 ▼		
Slovak Republic	535 ▼		
Bulgaria	532 ▼		
New Zealand	531 ▼		
Slovenia	530 ▼		
Austria	529 ▼		
Lithuania <sup>2,4</sup>	528 ▼		
Australia	527 ▼		
Poland	526 ▼		
		<b>Benchmarking education systems</b>	
		<i>Florida-USA</i> <sup>1,4</sup>	569 ▲
		<i>Ontario-CAN</i> <sup>2</sup>	552
		<i>Alberta-CAN</i> <sup>2</sup>	548 ▼
		<i>Quebec-CAN</i>	538 ▼
		<i>Andalusia-ESP</i>	515 ▼
		<i>Dubai-UAE</i>	476 ▼
		<i>Maltese-MLT</i>	457 ▼
		<i>Abu Dhabi-UAE</i>	424 ▼

▲ Average score is higher than U.S. average score.

▼ Average score is lower than U.S. average score.

<sup>1</sup> National Defined Population covers less than 90 percent of National Target Population defined by PIRLS.

<sup>2</sup> National Defined Population covers 90 percent to 95 percent of National Target Population defined by PIRLS.

<sup>3</sup> Met guidelines for sample participation rates only after replacement schools were included.

<sup>4</sup> National Target Population does not include all of the International Target Population defined by PIRLS.

<sup>5</sup> Nearly satisfied guidelines for sample participation rates after replacement schools were included.

<sup>6</sup> Exclusion rates for Azerbaijan and Georgia are slightly underestimated as some conflict zones were not covered and no official statistics were available.

<sup>7</sup> The PIRLS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 15 percent, though it is less than 25 percent.

<sup>8</sup> The PIRLS International Study Center has reservations about the reliability of the average achievement score because the percentage of students with achievement too low for estimation exceeds 25 percent.

NOTE: Education systems are ordered by 2011 average score. Italics indicate participants identified and counted in this report as an education system and not as a separate country. The Progress in International Reading Literacy Study (PIRLS) scores are reported on a scale from 0 to 1,000, with the scale average set at 500 and the standard deviation set at 100. The PIRLS average includes only education systems that are members of the International Association for the Evaluation of Educational Achievement (IEA), which develops and implements PIRLS at the international level. "Benchmarking" education systems are not members of the IEA and are therefore not included in the average. All U.S. state data are based on public school students only.  
SOURCE: Thompson, S., Provasnik, S., Kastberg, D., Ferraro, D., Lemanski, N., Roey, S., and Jenkins, F. (2012). *Highlights From PIRLS 2011: Reading Achievement of U.S. Fourth-Grade Students in an International Context* (NCES 2013-010), table 3, data from the International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study (PIRLS), 2011. See *Digest of Education Statistics 2012*, table 462.

In 2011, there were 53 education systems that had PIRLS reading literacy data at grade 4. These 53 education systems included both countries and other benchmarking education systems. In addition to participating in the U.S. national sample, Florida-USA participated individually and was included as an education system. In 2011, the U.S. average 4th-grade reading literacy score (556) was higher than the PIRLS scale average (500). The United States was among the top 13 education systems in reading literacy (5 education systems had higher average scores, and 7 had scores that were not measurably different).

The United States scored higher, on average, than 40 education systems.

The five education systems with average reading scores above the U.S. score were Finland, Hong Kong-CHN, the Russian Federation, Singapore, and, within the United States, Florida-USA. Additionally, Florida-USA's average score (569) was higher than the PIRLS scale average. No education system scored higher than Florida-USA, although four had scores that were not measurably different. Forty-eight education systems scored lower than Florida-USA.

**Reference tables:** *Digest of Education Statistics 2012*, tables 460, 461, 462

**For more information, see the Reader's Guide and the Guide to Sources.**