

# the condition of education 2003



## INDICATOR 10

# International Comparisons of Reading Literacy in Grade 4

The indicator and corresponding tables are taken directly from *The Condition of Education 2003*. Therefore, the page numbers may not be sequential.

Additional information about the survey data and supplementary notes can be found in the full report. For a copy of *The Condition of Education 2003*, visit the NCES web site (<http://nces.ed.gov/pubsearch/pubsinfo.sap?pubid=2003067>) or contact ED PUBs at 1-877-4ED-PUBS.

**Suggested Citation:**

U.S. Department of Education, National Center for Education Statistics, *The Condition of Education 2003*, NCES 2003-067, Washington, DC: U.S. Government Printing Office, 2003.

# Academic Outcomes

## International Comparisons of Reading Literacy in Grade 4

*U.S. 4th-graders performed above the international average of 35 countries in reading literacy in 2001. Three countries had a higher average combined reading literacy scale score than the United States and 23 countries had lower average scores.*

The Progress in International Reading Literacy Study (PIRLS) assessed the reading literacy of 4th-graders in 35 countries in 2001. The average U.S. 4th-grade combined reading literacy scale score of 542 was above the international average of the 35 countries. England, the Netherlands, and Sweden had a higher combined reading literacy scale score, and 23 countries had a lower average score than the U.S. average. There were no detectable differences between the U.S. average scale score and the average score in 8 countries.

For the PIRLS assessment, combined reading literacy was divided into two subscales: reading for literary purposes and for informational purposes. U.S. 4th-graders had a higher average scale score on reading for literary purposes than on reading for informational purposes. They had a higher average scale score than the international average on both subscales. On reading for literary purposes, Sweden had a higher average scale score, and 26 countries had a lower average score than the U.S. average. No difference was found between the average score of 7 countries and the U.S. average. On reading for informational purposes, Bulgaria, England, Latvia, the Netherlands, and Sweden had a higher average scale score

than the United States. No difference was found between the average scale score of 12 countries and the U.S. average, and 17 countries had a lower average score than that of U.S. 4th-graders (see supplemental table 10-1).

In all 35 countries, females outperformed males on the combined reading literacy scale, with a gap ranging from 27 points in Belize, Iran, and New Zealand to 8 points in Italy. Among U.S. 4th-graders, females had an average score of 551, while males had an average score of 533, a gap of 18 points.

Nineteen percent of U.S. students reached the top 10 percent benchmark of the combined reading literacy scale, meaning that almost one-fifth of U.S. respondents scored in the top 10 percent internationally. Forty-one percent of U.S. 4th-graders reached the upper quarter benchmark, and 68 percent reached the median benchmark, meaning that almost 70 percent of U.S. 4th-graders scored above the international average. Eighty-nine percent of U.S. students who were assessed reached the lower quarter benchmark (see supplemental table 10-2).

<sup>1</sup>Country did not meet the international sampling and/or other guidelines. For more information, see supplemental note 5.

<sup>2</sup>Canada is represented by the provinces of Ontario and Quebec only.

<sup>3</sup>Hong Kong SAR is a Special Administrative Region (SAR) of the People's Republic of China.

NOTE: The target population was the upper of the two adjacent grades with the most 9-year-olds. In most countries, this was 4th grade. The international average (500) is the weighted average of the national averages of the 35 countries, with a standard deviation of 100.

SOURCE: Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., and Kennedy, A.M. (2003). *PIRLS 2001 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools in 35 Countries*, exhibit 1.1. Data from the International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study, 2001.



FOR MORE INFORMATION:  
Supplemental Note 5  
Supplemental Tables 10-1,  
10-2  
NCES 2003-073

### INTERNATIONAL READING PERFORMANCE: Average combined reading literacy scale score of 4th-graders, by country: 2001

Average score relative to the United States	Country and score					
Significantly higher	Sweden	561	Netherlands <sup>1</sup>	554	England <sup>1</sup>	553
Not significantly different	Bulgaria	550	Hungary	543	Italy	541
	Latvia	545	Lithuania <sup>1</sup>	543	Germany	539
	Canada <sup>2</sup>	544	United States	542	Czech Republic	537
Significantly lower	New Zealand	529	Iceland	512	Turkey	449
	Hong Kong SAR <sup>3</sup>	528	Romania	512	Macedonia, Republic of	442
	Russian Federation <sup>1</sup>	528	Israel <sup>1</sup>	509	Colombia	422
	Scotland <sup>1</sup>	528	Slovenia	502	Argentina	420
	Singapore	528	<i>International average</i>	500	Iran, Islamic Republic of	414
	France	525	Norway	499	Kuwait	396
	Greece <sup>1</sup>	524	Cyprus	494	Morocco <sup>1</sup>	350
	Slovak Republic	518	Moldova, Republic of	492	Belize	327

## International Comparisons of Reading Literacy in Grade 4

Table 10-1. Average combined reading literacy scale score of 4th-graders, by reading subscale, sex, and country: 2001

Country	Combined reading literacy	Reading subscale		Sex		Female-male difference
		Literary subscale	Informational subscale	Female	Male	
International average	500*	500*	500*	510	490	20
Argentina	420*	419*	422*	428	410	18
Belize	327*	330*	332*	341	314	27
Bulgaria	550	550	551*	562	538	24
Canada <sup>1</sup>	544	545	541	553	536	17
Colombia	422*	425*	424*	428	416	12
Cyprus	494*	498*	490*	506	482	24
Czech Republic	537	535*	536	543	531	12
England <sup>2</sup>	553*	559	546*	564	541	22
France	525*	518*	533	531	520	11
Germany	539	537*	538	545	533	13
Greece <sup>2</sup>	524*	528*	521*	535	514	21
Hong Kong SAR <sup>3</sup>	528*	518*	537	538	519	19
Hungary	543	548	537	550	536	14
Iceland	512*	520*	504*	522	503	19
Iran, Islamic Republic of	414*	421*	408*	426	399	27
Israel <sup>2</sup>	509*	510*	507*	520	498	22
Italy	541	543	536	545	537	8
Kuwait <sup>4</sup>	396*	394*	403*	—	—	—
Latvia	545	537*	547*	556	534	22
Lithuania <sup>2</sup>	543	546	540	552	535	17
Macedonia, Republic of	442*	441*	445*	452	431	21
Moldova, Republic of	492*	480*	505*	504	479	25
Morocco <sup>2</sup>	350*	347*	358*	361	341	20
Netherlands <sup>2</sup>	554*	552	553*	562	547	15
New Zealand	529*	531*	525	542	516	27
Norway	499*	506*	492*	510	489	21
Romania	512*	512*	512*	519	504	14
Russian Federation <sup>2</sup>	528*	523*	531	534	522	12
Scotland <sup>2</sup>	528*	529*	527	537	519	17
Singapore	528*	528*	527	540	516	24
Slovak Republic	518*	512*	522*	526	510	16
Slovenia	502*	499*	503*	512	491	22
Sweden	561*	559*	559*	572	550	22
Turkey	449*	448*	452*	459	440	19
United States <sup>2</sup>	542	550	533	551	533	18

—Not available.

\*Significantly different from the United States.

<sup>1</sup>Canada is represented by the provinces of Ontario and Quebec only.

<sup>2</sup>Country did not meet the international sampling and/or other guidelines. For more information, see *supplemental note 5*.

<sup>3</sup>Hong Kong SAR is a Special Administrative Region (SAR) of the People's Republic of China.

<sup>4</sup>Differences in scores by sex are not shown here for Kuwait due to low response rates on the questions related to sex. However, the international average includes Kuwait's average scale score.

NOTE: The target population was the upper of the two adjacent grades with the most 9-year-olds. In most countries, this was 4th grade. The international average is the weighted average of the national averages of the 35 countries. For more information on the Progress in International Reading Literacy Study (PIRLS), 2001, see *supplemental note 5*.

SOURCE: Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., and Kennedy, A.M. (2003). *PIRLS 2001 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools in 35 Countries*, exhibits 1.1, 1.3, 2.1, and 2.3. Data from the International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study, 2001.

## International Comparisons of Reading Literacy in Grade 4

Table 10-2. Percentage of students reaching PIRLS international benchmarks in combined reading literacy, by country: 2001

Country	Top 10 percent	Upper quarter	Median	Lower quarter
Argentina	2	5	17	46
Belize	0	1	5	16
Bulgaria	21	45	72	91
Canada <sup>1</sup>	16	37	69	93
Colombia	1	3	14	45
Cyprus	6	18	45	77
Czech Republic	10	32	68	93
England <sup>2</sup>	24	45	72	90
France	9	26	60	90
Germany	12	34	69	93
Greece <sup>2</sup>	10	28	60	89
Hong Kong SAR <sup>3</sup>	6	26	64	92
Hungary	13	36	71	94
Iceland	7	23	53	85
Iran, Islamic Republic of	1	4	16	42
Israel <sup>2</sup>	11	28	54	79
Italy	14	36	69	92
Kuwait	0	2	10	36
Latvia	12	36	73	96
Lithuania <sup>2</sup>	13	36	71	95
Macedonia, Republic of	3	10	28	55
Moldova, Republic of	4	15	42	79
Morocco <sup>2</sup>	1	3	8	23
Netherlands <sup>2</sup>	14	40	79	98
New Zealand	17	35	62	84
Norway	6	19	48	80
Romania	11	27	54	81
Russian Federation <sup>2</sup>	8	27	64	92
Scotland <sup>2</sup>	14	32	62	87
Singapore	15	35	64	85
Slovak Republic	7	23	59	88
Slovenia	4	17	48	83
Sweden	20	47	80	96
Turkey	2	7	25	58
United States <sup>2</sup>	19	41	68	89

<sup>1</sup>Canada is represented by the provinces of Ontario and Quebec only.

<sup>2</sup>Country did not meet the international sampling and/or other guidelines. For more information, see *supplemental note 5*.

<sup>3</sup>Hong Kong SAR is a Special Administrative Region (SAR) of the People's Republic of China.

NOTE: The target population was the upper of the two adjacent grades with the most 9-year-olds. In most countries, this was 4th grade. The international average is the weighted average of the national averages of the 35 countries. For definitions of the reading literacy benchmarks and more information on the Progress in International Reading Literacy Study (PIRLS), 2001, see *supplemental note 5*.

SOURCE: Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., and Kennedy, A.M. (2003). *PIRLS 2001 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools in 35 Countries*, exhibit 3.1. Data from the International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study, 2001.

## International Comparisons of Reading Literacy in Grade 4

Table S10-1. Standard errors for the average combined reading literacy scale score of 4th-graders, by reading subscale, sex, and country: 2001

Country	Combined reading literacy	Reading subscale		Sex		Female-male difference
		Literary subscale	Informational subscale	Female	Male	
International average	0.6	0.6	0.7	0.7	0.7	0.7
Argentina	5.9	5.8	5.4	6.2	6.5	4.7
Belize	4.7	4.9	4.9	5.3	5.2	4.8
Bulgaria	3.8	3.9	3.6	3.7	4.7	3.6
Canada	2.4	2.6	2.4	2.6	2.6	2.1
Colombia	4.4	4.2	4.3	5.1	4.7	4.3
Cyprus	3.0	2.5	3.0	3.3	3.6	3.5
Czech Republic	2.3	2.3	2.7	2.8	2.6	2.8
England	3.4	3.9	3.6	3.9	3.7	3.3
France	2.4	2.6	2.5	2.7	3.0	3.3
Germany	1.9	1.9	1.9	2.2	2.5	2.7
Greece	3.5	3.3	3.7	3.8	4.0	3.9
Hong Kong SAR	3.1	3.1	2.9	3.0	3.5	2.9
Hungary	2.2	2.0	2.2	2.4	2.5	2.1
Iceland	1.2	1.3	1.5	1.9	1.5	2.4
Iran, Islamic Republic of	4.2	4.5	4.6	5.7	5.6	8.1
Israel	2.8	2.6	2.9	3.4	3.7	4.3
Italy	2.4	2.7	2.4	2.6	2.7	2.5
Kuwait	4.3	3.8	4.5	—	—	—
Latvia	2.3	2.2	2.3	3.1	2.6	3.4
Lithuania	2.6	3.1	2.7	3.0	2.7	2.7
Macedonia, Republic of	4.6	4.5	5.2	5.1	4.8	3.6
Moldova, Republic of	4.0	3.7	4.7	4.7	4.0	4.0
Morocco	9.6	8.4	10.9	9.6	10.9	6.8
Netherlands	2.5	2.5	2.6	2.7	2.8	2.2
New Zealand	3.6	3.9	3.8	4.7	4.2	5.4
Norway	2.9	2.7	2.8	3.5	3.4	3.9
Romania	4.6	4.7	4.6	4.2	5.7	3.8
Russian Federation	4.4	3.9	4.3	4.3	4.8	2.3
Scotland	3.6	3.5	3.6	3.9	4.2	4.0
Singapore	5.2	5.6	4.8	5.3	5.7	4.1
Slovak Republic	2.8	2.6	2.7	3.0	3.3	3.0
Slovenia	2.0	1.8	1.9	2.5	2.4	2.8
Sweden	2.2	2.4	2.2	2.6	2.5	2.6
Turkey	3.5	3.4	3.8	4.0	3.7	3.1
United States	3.8	3.8	3.7	3.8	4.9	4.1

—Not available.

SOURCE: Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., and Kennedy, A.M. (2003). *PIRLS 2001 International Report: IEAs Study of Reading Literacy Achievement in Primary Schools in 35 Countries*, exhibits 1.1, 1.3, 2.1, and 2.3. Data from the International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study, 2001.

## International Comparisons of Reading Literacy in Grade 4

Table S10-2. Standard errors for the percentage of students reaching PIRLS international benchmarks in combined reading literacy, by country: 2001

Country	Top 10 percent	Upper quarter	Median	Lower quarter
Argentina	0.4	0.8	1.6	2.5
Belize	0.2	0.4	0.6	1.3
Bulgaria	1.3	1.9	1.9	1.1
Canada	1.0	1.3	1.3	0.6
Colombia	0.4	0.8	1.5	2.4
Cyprus	0.8	1.3	1.6	1.4
Czech Republic	0.9	1.5	1.5	0.7
England	1.6	1.9	1.6	1.0
France	0.9	1.2	1.4	0.9
Germany	0.8	1.3	1.2	0.6
Greece	0.8	2.0	2.2	1.2
Hong Kong SAR	0.7	1.7	1.9	1.1
Hungary	0.9	1.5	1.2	0.6
Iceland	0.6	1.0	1.0	0.8
Iran, Islamic Republic of	0.2	0.5	1.4	1.9
Israel	0.8	1.2	1.4	1.1
Italy	1.0	1.3	1.5	0.8
Kuwait	0.1	0.4	1.1	2.0
Latvia	1.1	1.6	1.5	0.6
Lithuania	1.4	1.7	1.7	0.6
Macedonia, Republic of	0.4	0.9	1.5	2.1
Moldova, Republic of	0.9	1.8	2.5	1.7
Morocco	0.9	1.4	2.1	3.0
Netherlands	1.0	1.7	1.5	0.5
New Zealand	1.4	1.7	1.9	1.3
Norway	0.9	1.2	1.4	1.4
Romania	1.3	2.0	2.1	1.7
Russian Federation	1.0	2.1	2.3	1.6
Scotland	1.1	1.8	1.8	1.1
Singapore	1.5	2.3	2.3	1.6
Slovak Republic	1.0	1.4	1.7	1.1
Slovenia	0.5	1.0	1.2	0.9
Sweden	1.1	1.4	1.3	0.5
Turkey	0.3	0.9	1.6	1.7
United States	1.3	2.0	2.0	1.2

SOURCE: Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., and Kennedy, A.M. (2003). *PIRLS 2001 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools in 35 Countries*, exhibit 3.1. Data from the International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study, 2001.

## International Comparisons of Reading Literacy in Grade 4

Table S10. Standard errors for the average combined reading literacy scale score of 4th-graders, by country: 2001

Country	Total reading achievement
International average	0.6
Argentina	5.9
Belize	4.7
Bulgaria	3.8
Canada	2.4
Colombia	4.4
Cyprus	3.0
Czech Republic	2.3
England	3.4
France	2.4
Germany	1.9
Greece	3.5
Hong Kong SAR	3.1
Hungary	2.2
Iceland	1.2
Iran, Islamic Republic of	4.2
Israel	2.8
Italy	2.4
Kuwait	4.3
Latvia	2.3
Lithuania	2.6
Macedonia, Republic of	4.6
Moldova, Republic of	4.0
Morocco	9.6
Netherlands	2.5
New Zealand	3.6
Norway	2.9
Romania	4.6
Russian Federation	4.4
Scotland	3.6
Singapore	5.2
Slovak Republic	2.8
Slovenia	2.0
Sweden	2.2
Turkey	3.5
United States	3.8

SOURCE: Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., and Kennedy, A.M. (2003). *PIRLS 2001 International Report: IEAs Study of Reading Literacy Achievement in Primary Schools in 35 Countries*, exhibit 1.1. Data from the International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study, 2001.

## International Comparisons of Reading Literacy in Grade 4

Table S10-1. Standard errors for the average combined reading literacy scale score of 4th-graders, by reading subscale, sex, and country: 2001

Country	Combined reading literacy	Reading subscale		Sex		Female-male difference
		Literary subscale	Informational subscale	Female	Male	
International average	0.6	0.6	0.7	0.7	0.7	0.7
Argentina	5.9	5.8	5.4	6.2	6.5	4.7
Belize	4.7	4.9	4.9	5.3	5.2	4.8
Bulgaria	3.8	3.9	3.6	3.7	4.7	3.6
Canada	2.4	2.6	2.4	2.6	2.6	2.1
Colombia	4.4	4.2	4.3	5.1	4.7	4.3
Cyprus	3.0	2.5	3.0	3.3	3.6	3.5
Czech Republic	2.3	2.3	2.7	2.8	2.6	2.8
England	3.4	3.9	3.6	3.9	3.7	3.3
France	2.4	2.6	2.5	2.7	3.0	3.3
Germany	1.9	1.9	1.9	2.2	2.5	2.7
Greece	3.5	3.3	3.7	3.8	4.0	3.9
Hong Kong SAR	3.1	3.1	2.9	3.0	3.5	2.9
Hungary	2.2	2.0	2.2	2.4	2.5	2.1
Iceland	1.2	1.3	1.5	1.9	1.5	2.4
Iran, Islamic Republic of	4.2	4.5	4.6	5.7	5.6	8.1
Israel	2.8	2.6	2.9	3.4	3.7	4.3
Italy	2.4	2.7	2.4	2.6	2.7	2.5
Kuwait	4.3	3.8	4.5	—	—	—
Latvia	2.3	2.2	2.3	3.1	2.6	3.4
Lithuania	2.6	3.1	2.7	3.0	2.7	2.7
Macedonia, Republic of	4.6	4.5	5.2	5.1	4.8	3.6
Moldova, Republic of	4.0	3.7	4.7	4.7	4.0	4.0
Morocco	9.6	8.4	10.9	9.6	10.9	6.8
Netherlands	2.5	2.5	2.6	2.7	2.8	2.2
New Zealand	3.6	3.9	3.8	4.7	4.2	5.4
Norway	2.9	2.7	2.8	3.5	3.4	3.9
Romania	4.6	4.7	4.6	4.2	5.7	3.8
Russian Federation	4.4	3.9	4.3	4.3	4.8	2.3
Scotland	3.6	3.5	3.6	3.9	4.2	4.0
Singapore	5.2	5.6	4.8	5.3	5.7	4.1
Slovak Republic	2.8	2.6	2.7	3.0	3.3	3.0
Slovenia	2.0	1.8	1.9	2.5	2.4	2.8
Sweden	2.2	2.4	2.2	2.6	2.5	2.6
Turkey	3.5	3.4	3.8	4.0	3.7	3.1
United States	3.8	3.8	3.7	3.8	4.9	4.1

—Not available.

SOURCE: Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., and Kennedy, A.M. (2003). *PIRLS 2001 International Report: IEAs Study of Reading Literacy Achievement in Primary Schools in 35 Countries*, exhibits 1.1, 1.3, 2.1, and 2.3. Data from the International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study, 2001.

## International Comparisons of Reading Literacy in Grade 4

Table S10-2. Standard errors for the percentage of students reaching PIRLS international benchmarks in combined reading literacy, by country: 2001

Country	Top 10 percent	Upper quarter	Median	Lower quarter
Argentina	0.4	0.8	1.6	2.5
Belize	0.2	0.4	0.6	1.3
Bulgaria	1.3	1.9	1.9	1.1
Canada	1.0	1.3	1.3	0.6
Colombia	0.4	0.8	1.5	2.4
Cyprus	0.8	1.3	1.6	1.4
Czech Republic	0.9	1.5	1.5	0.7
England	1.6	1.9	1.6	1.0
France	0.9	1.2	1.4	0.9
Germany	0.8	1.3	1.2	0.6
Greece	0.8	2.0	2.2	1.2
Hong Kong SAR	0.7	1.7	1.9	1.1
Hungary	0.9	1.5	1.2	0.6
Iceland	0.6	1.0	1.0	0.8
Iran, Islamic Republic of	0.2	0.5	1.4	1.9
Israel	0.8	1.2	1.4	1.1
Italy	1.0	1.3	1.5	0.8
Kuwait	0.1	0.4	1.1	2.0
Latvia	1.1	1.6	1.5	0.6
Lithuania	1.4	1.7	1.7	0.6
Macedonia, Republic of	0.4	0.9	1.5	2.1
Moldova, Republic of	0.9	1.8	2.5	1.7
Morocco	0.9	1.4	2.1	3.0
Netherlands	1.0	1.7	1.5	0.5
New Zealand	1.4	1.7	1.9	1.3
Norway	0.9	1.2	1.4	1.4
Romania	1.3	2.0	2.1	1.7
Russian Federation	1.0	2.1	2.3	1.6
Scotland	1.1	1.8	1.8	1.1
Singapore	1.5	2.3	2.3	1.6
Slovak Republic	1.0	1.4	1.7	1.1
Slovenia	0.5	1.0	1.2	0.9
Sweden	1.1	1.4	1.3	0.5
Turkey	0.3	0.9	1.6	1.7
United States	1.3	2.0	2.0	1.2

SOURCE: Mullis, I.V.S., Martin, M.O., Gonzalez, E.J., and Kennedy, A.M. (2003). *PIRLS 2001 International Report: IEA's Study of Reading Literacy Achievement in Primary Schools in 35 Countries*, exhibit 3.1. Data from the International Association for the Evaluation of Educational Achievement (IEA), Progress in International Reading Literacy Study, 2001.