

Appendix G

Percentiles and Standard Deviations of Science Achievement

Country	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
Armenia	270 (10.5)	300 (4.9)	355 (5.7)	419 (4.6)	477 (5.1)	529 (3.9)	559 (7.8)
Australia	371 (9.0)	407 (5.9)	466 (4.3)	521 (2.3)	571 (3.0)	614 (3.3)	638 (5.3)
Austria	408 (4.8)	438 (6.1)	485 (4.2)	535 (3.6)	581 (2.0)	619 (3.0)	640 (2.5)
Azerbaijan	274 (7.6)	307 (6.2)	369 (6.1)	439 (8.7)	509 (7.2)	565 (6.4)	598 (11.3)
Bahrain	259 (9.7)	305 (9.0)	382 (6.1)	458 (3.4)	525 (2.9)	578 (5.5)	611 (5.1)
Belgium (Flemish)	411 (3.5)	432 (4.5)	471 (2.0)	511 (1.9)	548 (2.4)	581 (3.6)	600 (2.4)
Chile	345 (3.1)	376 (5.5)	428 (2.7)	483 (2.3)	535 (2.4)	579 (2.9)	604 (4.4)
Chinese Taipei	420 (6.5)	455 (7.7)	506 (4.3)	557 (2.6)	603 (2.6)	641 (2.8)	664 (4.2)
Croatia	411 (4.7)	435 (4.6)	475 (3.0)	518 (2.0)	559 (3.5)	594 (2.5)	615 (2.0)
Czech Republic	412 (9.3)	442 (5.0)	491 (2.3)	539 (3.0)	586 (3.8)	625 (2.8)	648 (3.8)
Denmark	401 (7.0)	434 (5.6)	483 (3.7)	531 (5.2)	578 (3.1)	617 (2.3)	640 (4.3)
England	384 (6.3)	420 (8.1)	476 (5.1)	535 (3.8)	586 (3.5)	629 (4.0)	653 (3.0)
Finland	456 (6.8)	485 (4.3)	529 (3.4)	574 (2.6)	615 (2.2)	651 (2.6)	674 (2.8)
Georgia	299 (6.5)	336 (7.5)	401 (7.2)	462 (3.4)	516 (3.7)	560 (4.2)	585 (2.9)
Germany	406 (7.1)	435 (3.9)	482 (3.6)	532 (3.1)	577 (2.8)	614 (2.0)	636 (4.9)
Hong Kong SAR	406 (16.3)	443 (7.2)	493 (3.3)	541 (3.9)	585 (2.7)	622 (2.8)	644 (5.1)
Hungary	377 (8.7)	420 (7.2)	484 (6.4)	542 (4.0)	594 (4.0)	637 (3.5)	662 (4.2)
Iran, Islamic Rep. of	274 (6.7)	317 (9.7)	390 (5.6)	460 (3.8)	523 (3.7)	575 (4.5)	604 (6.0)
Ireland	379 (3.3)	412 (3.9)	466 (4.5)	521 (2.7)	571 (4.2)	613 (5.5)	637 (3.6)
Italy	397 (8.3)	429 (3.1)	477 (3.4)	527 (4.0)	573 (3.1)	615 (2.1)	641 (3.3)
Japan	449 (4.1)	476 (4.2)	519 (2.6)	561 (1.7)	601 (1.9)	637 (4.5)	658 (2.8)
Kazakhstan	345 (6.7)	375 (8.2)	431 (5.9)	496 (6.9)	558 (6.7)	610 (4.9)	642 (8.6)
Korea, Rep. of	476 (2.5)	502 (3.2)	545 (2.0)	589 (2.3)	632 (1.8)	669 (2.3)	690 (3.5)
Kuwait	130 (10.6)	176 (7.1)	258 (6.7)	355 (6.3)	441 (4.7)	504 (5.4)	541 (4.3)
Lithuania	397 (6.0)	426 (4.4)	471 (2.9)	518 (2.3)	561 (2.0)	598 (3.1)	620 (5.0)
Malta	271 (9.6)	314 (4.1)	384 (2.5)	453 (2.1)	514 (2.9)	565 (3.2)	594 (2.2)
Morocco	59 (7.0)	100 (7.6)	171 (7.0)	257 (5.1)	351 (5.1)	440 (5.2)	487 (7.3)
Netherlands	439 (8.2)	461 (5.2)	497 (2.2)	534 (2.4)	568 (1.8)	597 (4.4)	613 (2.2)
New Zealand	345 (6.9)	381 (4.8)	442 (3.2)	503 (2.6)	558 (2.3)	602 (3.2)	626 (2.8)
Northern Ireland	388 (8.0)	425 (5.2)	473 (1.7)	522 (3.3)	566 (2.7)	603 (4.9)	625 (4.4)
Norway	383 (6.1)	411 (4.1)	453 (2.4)	497 (2.5)	538 (3.7)	573 (3.8)	593 (3.7)
Oman	162 (7.0)	208 (6.0)	291 (5.8)	385 (4.4)	467 (3.4)	532 (3.8)	568 (7.0)
Poland	369 (4.7)	402 (3.6)	455 (2.6)	509 (3.0)	558 (2.7)	601 (2.3)	627 (3.0)
Portugal	397 (10.7)	429 (6.2)	476 (6.0)	524 (3.7)	571 (3.8)	613 (4.5)	637 (5.4)
Qatar	176 (7.4)	222 (6.4)	304 (6.2)	401 (7.1)	488 (7.1)	554 (3.3)	590 (4.9)
Romania	302 (20.1)	356 (14.3)	444 (8.7)	517 (5.1)	580 (5.2)	631 (3.7)	659 (5.3)
Russian Federation	430 (5.2)	458 (3.4)	505 (3.6)	554 (3.5)	603 (2.9)	643 (3.3)	667 (4.8)
Saudi Arabia	245 (13.0)	287 (6.7)	359 (5.3)	435 (3.9)	502 (6.5)	560 (9.3)	593 (9.1)
Serbia	366 (10.7)	407 (5.5)	467 (4.7)	520 (3.0)	570 (4.2)	615 (5.4)	642 (4.1)
Singapore	427 (6.7)	469 (6.0)	531 (5.8)	590 (3.9)	644 (4.1)	689 (3.8)	713 (4.0)
Slovak Republic	390 (13.9)	430 (5.5)	486 (4.3)	539 (4.6)	586 (2.7)	625 (3.6)	648 (5.4)
Slovenia	388 (4.9)	421 (2.6)	474 (2.8)	525 (3.7)	572 (4.2)	612 (3.6)	636 (4.1)
Spain	378 (8.3)	407 (4.2)	458 (4.3)	509 (2.7)	556 (3.5)	595 (4.6)	620 (3.0)
Sweden	403 (6.2)	434 (4.6)	486 (3.1)	539 (2.1)	586 (2.6)	625 (5.2)	648 (4.2)
Thailand	305 (10.2)	343 (7.9)	410 (8.8)	479 (4.8)	538 (5.2)	585 (4.6)	613 (6.7)
Tunisia	143 (5.6)	187 (6.5)	266 (7.0)	351 (8.8)	432 (5.4)	495 (5.0)	525 (3.6)
Turkey	283 (14.3)	332 (8.6)	403 (5.6)	471 (3.9)	531 (4.0)	581 (3.6)	611 (5.1)
United Arab Emirates	238 (3.1)	279 (3.6)	350 (3.0)	433 (3.4)	507 (2.1)	569 (2.5)	604 (2.6)
United States	406 (3.9)	440 (2.6)	494 (2.4)	549 (2.0)	599 (2.5)	641 (2.3)	666 (2.3)
Yemen	25 (7.1)	60 (5.3)	122 (10.4)	200 (9.3)	288 (7.3)	369 (7.8)	418 (14.5)

() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.
Note: Percentiles are defined in terms of percentages of students at or below a point on the scale.

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

Appendix G.1: Percentiles of Science Achievement (Continued)

Country	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
Sixth Grade Participants							
Botswana	149 (6.9)	190 (4.2)	271 (6.3)	375 (6.7)	466 (6.0)	535 (7.0)	572 (10.8)
Honduras	291 (10.2)	321 (11.8)	375 (7.3)	435 (5.6)	491 (6.5)	539 (7.0)	568 (6.4)
Yemen	144 (15.5)	187 (11.5)	264 (8.5)	351 (6.7)	432 (5.5)	494 (7.1)	529 (5.9)
Benchmarking Participants							
Alberta, Canada	419 (5.7)	450 (4.6)	496 (3.6)	545 (2.5)	590 (3.2)	628 (3.0)	650 (4.5)
Ontario, Canada	393 (5.8)	427 (5.9)	479 (3.3)	532 (3.0)	581 (3.7)	622 (4.0)	646 (3.3)
Quebec, Canada	417 (6.2)	441 (4.9)	478 (3.5)	517 (2.9)	556 (4.6)	591 (3.8)	611 (3.2)
Abu Dhabi, UAE	226 (7.9)	264 (5.6)	333 (8.0)	417 (6.4)	491 (6.1)	550 (5.9)	583 (3.1)
Dubai, UAE	260 (5.7)	305 (5.7)	386 (3.4)	470 (3.2)	544 (2.9)	600 (2.8)	631 (2.6)
Florida, US	419 (3.3)	447 (4.1)	494 (3.1)	546 (5.4)	596 (3.4)	641 (5.0)	667 (8.6)
North Carolina, US	403 (6.5)	435 (4.8)	487 (5.2)	542 (5.3)	591 (3.0)	634 (3.8)	660 (6.9)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

Country	5th Percentile	10th Percentile	25th Percentile	50th Percentile	75th Percentile	90th Percentile	95th Percentile
Armenia	273 (3.8)	309 (4.5)	373 (4.5)	441 (3.3)	506 (3.7)	557 (3.1)	585 (6.2)
Australia	381 (7.1)	412 (4.5)	463 (6.4)	519 (4.7)	575 (6.6)	628 (6.6)	658 (12.6)
Bahrain	275 (5.1)	313 (5.2)	384 (2.7)	460 (2.6)	525 (2.5)	579 (2.2)	610 (3.2)
Chile	341 (3.4)	367 (3.7)	410 (3.3)	461 (2.5)	511 (2.4)	557 (4.6)	583 (3.8)
Chinese Taipei	415 (7.5)	452 (5.5)	510 (3.5)	571 (2.6)	623 (3.0)	665 (2.6)	689 (4.2)
England	385 (10.9)	419 (10.6)	477 (5.8)	538 (5.3)	594 (6.2)	639 (5.2)	664 (5.1)
Finland	444 (3.9)	470 (2.5)	509 (2.6)	555 (3.3)	597 (3.0)	634 (3.6)	656 (4.7)
Georgia	258 (5.3)	296 (8.7)	363 (3.8)	429 (3.3)	483 (3.4)	528 (5.7)	555 (4.2)
Ghana	121 (5.0)	159 (5.2)	226 (6.8)	306 (7.7)	388 (7.3)	452 (4.8)	488 (7.8)
Hong Kong SAR	398 (10.9)	434 (5.3)	492 (4.8)	544 (2.5)	587 (2.9)	622 (4.7)	643 (4.6)
Hungary	376 (8.6)	412 (4.6)	475 (4.7)	530 (2.6)	579 (3.9)	621 (3.1)	645 (3.3)
Indonesia	272 (8.0)	303 (10.9)	353 (6.6)	408 (4.4)	461 (3.3)	505 (4.3)	530 (4.3)
Iran, Islamic Rep. of	325 (4.1)	357 (6.1)	412 (4.2)	476 (4.5)	537 (3.1)	590 (3.8)	621 (6.8)
Israel	347 (6.7)	386 (5.2)	456 (6.1)	524 (4.3)	582 (4.4)	630 (4.7)	656 (5.7)
Italy	369 (6.1)	400 (5.5)	452 (2.6)	505 (3.8)	554 (3.2)	594 (3.1)	618 (4.1)
Japan	422 (5.8)	458 (4.2)	511 (2.7)	563 (2.0)	610 (2.5)	649 (3.8)	674 (3.9)
Jordan	258 (10.2)	307 (10.9)	388 (4.8)	463 (4.4)	522 (3.6)	568 (2.8)	595 (3.2)
Kazakhstan	358 (5.3)	386 (5.0)	435 (5.4)	493 (4.8)	546 (5.5)	590 (4.2)	616 (4.5)
Korea, Rep. of	425 (3.3)	459 (3.8)	510 (2.8)	564 (1.5)	614 (1.9)	656 (2.0)	681 (2.5)
Lebanon	243 (6.6)	276 (6.6)	337 (5.8)	409 (6.4)	475 (6.2)	532 (5.4)	562 (5.9)
Lithuania	383 (3.9)	413 (3.2)	464 (3.2)	518 (3.0)	567 (2.8)	607 (2.7)	632 (4.4)
Macedonia, Rep. of	214 (8.0)	256 (6.7)	327 (8.4)	411 (10.0)	492 (5.3)	552 (6.5)	586 (8.9)
Malaysia	250 (7.7)	288 (9.8)	358 (9.4)	432 (7.0)	499 (6.4)	553 (6.5)	584 (7.9)
Morocco	235 (3.9)	266 (3.6)	317 (3.3)	376 (3.0)	435 (2.6)	488 (2.1)	518 (2.6)
New Zealand	365 (8.9)	399 (4.9)	455 (5.8)	515 (5.2)	572 (4.3)	621 (4.5)	647 (5.1)
Norway	368 (10.0)	399 (6.7)	447 (2.8)	499 (2.0)	544 (2.4)	584 (3.1)	609 (3.8)
Oman	225 (6.3)	268 (3.9)	343 (6.1)	429 (4.1)	502 (3.2)	556 (1.6)	586 (4.3)
Palestinian Nat'l Auth.	237 (6.2)	278 (5.8)	351 (4.2)	426 (4.0)	497 (4.6)	551 (4.0)	580 (5.3)
Qatar	212 (4.8)	255 (5.3)	334 (4.7)	426 (3.1)	507 (5.3)	571 (6.4)	606 (5.6)
Romania	316 (7.9)	351 (4.8)	408 (5.0)	468 (3.5)	523 (2.8)	572 (5.3)	601 (6.5)
Russian Federation	410 (6.3)	442 (6.5)	493 (2.8)	547 (4.0)	596 (2.8)	638 (3.7)	661 (4.4)
Saudi Arabia	295 (5.7)	328 (4.7)	382 (5.9)	439 (3.4)	494 (4.1)	541 (3.9)	567 (4.3)
Singapore	409 (8.8)	453 (8.5)	530 (7.6)	602 (4.6)	660 (3.4)	705 (2.4)	730 (4.6)
Slovenia	412 (5.5)	444 (4.0)	494 (4.2)	547 (3.4)	595 (3.2)	637 (2.1)	661 (3.5)
Sweden	368 (5.5)	403 (3.2)	458 (2.9)	515 (2.5)	566 (3.4)	608 (2.6)	633 (5.1)
Syrian Arab Republic	282 (4.2)	315 (5.4)	369 (4.9)	430 (5.0)	487 (3.9)	533 (4.3)	558 (5.0)
Thailand	317 (4.7)	346 (4.3)	397 (4.9)	453 (4.0)	504 (4.7)	551 (6.7)	581 (9.6)
Tunisia	329 (3.0)	352 (3.4)	393 (3.0)	438 (3.3)	484 (2.9)	526 (3.7)	550 (4.1)
Turkey	312 (3.3)	349 (4.8)	413 (4.4)	485 (5.1)	554 (4.4)	614 (6.5)	648 (6.4)
Ukraine	356 (8.0)	390 (6.1)	448 (5.7)	506 (4.1)	559 (5.3)	603 (4.3)	630 (4.9)
United Arab Emirates	299 (4.8)	335 (3.2)	399 (2.8)	468 (3.5)	532 (2.6)	587 (2.5)	619 (3.3)
United States	384 (5.6)	416 (3.2)	470 (3.0)	529 (2.9)	582 (2.8)	625 (2.5)	651 (5.7)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

Ninth Grade Participants

Botswana	218 (6.5)	260 (5.1)	336 (3.9)	415 (3.2)	479 (4.4)	530 (4.2)	561 (3.8)
Honduras	239 (3.9)	267 (3.6)	314 (3.6)	368 (4.3)	422 (6.2)	469 (5.7)	500 (11.4)
South Africa	162 (5.9)	193 (5.8)	251 (4.5)	323 (3.9)	401 (4.5)	483 (7.2)	541 (7.9)

Benchmarking Participants

Alberta, Canada	430 (6.9)	458 (4.7)	502 (3.6)	547 (2.6)	591 (3.1)	631 (2.5)	655 (4.1)
Ontario, Canada	405 (4.1)	432 (3.8)	476 (3.2)	524 (2.8)	569 (3.0)	606 (3.0)	629 (3.9)
Quebec, Canada	404 (4.5)	433 (4.1)	477 (3.0)	522 (3.5)	566 (2.8)	604 (3.0)	624 (3.1)
Abu Dhabi, UAE	304 (5.8)	339 (6.3)	398 (4.8)	463 (3.3)	526 (5.2)	581 (4.1)	614 (7.3)
Dubai, UAE	302 (7.0)	344 (5.6)	418 (4.3)	494 (3.1)	558 (3.7)	611 (2.7)	640 (3.6)
Alabama, US	335 (11.2)	370 (8.7)	428 (6.1)	489 (7.3)	547 (6.8)	596 (5.3)	624 (15.2)
California, US	355 (12.0)	389 (10.5)	443 (7.4)	501 (5.3)	557 (3.7)	603 (4.0)	632 (5.0)
Colorado, US	410 (9.6)	439 (4.4)	489 (4.6)	545 (5.4)	599 (4.0)	640 (5.9)	662 (6.1)
Connecticut, US	376 (9.6)	413 (5.7)	472 (4.3)	539 (6.4)	594 (6.5)	641 (3.7)	666 (6.4)
Florida, US	389 (12.0)	420 (13.3)	472 (9.0)	531 (7.7)	589 (9.2)	639 (7.0)	669 (10.9)
Indiana, US	401 (6.9)	432 (4.7)	483 (6.2)	537 (5.9)	585 (4.0)	627 (4.2)	652 (5.5)
Massachusetts, US	422 (12.2)	460 (7.5)	518 (6.7)	574 (8.2)	624 (6.4)	664 (6.8)	687 (4.4)
Minnesota, US	426 (7.9)	453 (10.2)	506 (6.3)	557 (4.3)	605 (5.9)	644 (6.1)	665 (4.3)
North Carolina, US	395 (15.6)	423 (6.7)	475 (8.1)	534 (5.6)	589 (6.0)	635 (8.6)	662 (8.6)

() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent. Note: Percentiles are defined in terms of percentages of students at or below a point on the scale.

Appendix G.3: Standard Deviations of Science Achievement

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Armenia	416 (3.8)	88 (1.8)	419 (4.0)	86 (2.0)	414 (4.3)	90 (2.1)
Australia	516 (2.8)	81 (2.1)	516 (3.1)	77 (2.3)	516 (3.7)	84 (2.6)
Austria	532 (2.8)	70 (1.4)	525 (2.8)	68 (1.8)	538 (3.6)	72 (1.6)
Azerbaijan	438 (5.6)	98 (2.6)	442 (6.3)	99 (2.7)	434 (5.7)	98 (2.9)
Bahrain	449 (3.5)	106 (2.1)	461 (5.5)	97 (3.1)	438 (4.6)	114 (3.1)
Belgium (Flemish)	509 (2.0)	58 (1.0)	503 (2.6)	57 (1.3)	514 (2.3)	58 (1.2)
Chile	480 (2.4)	78 (1.4)	474 (2.8)	75 (1.6)	486 (2.8)	81 (1.8)
Chinese Taipei	552 (2.2)	74 (1.3)	548 (2.6)	72 (1.8)	555 (2.4)	75 (1.5)
Croatia	516 (2.1)	62 (1.3)	514 (2.5)	60 (1.2)	518 (2.5)	65 (1.9)
Czech Republic	536 (2.5)	72 (2.0)	529 (2.9)	70 (2.1)	544 (2.7)	73 (2.6)
Denmark	528 (2.8)	73 (1.9)	527 (3.3)	72 (2.4)	529 (3.1)	73 (2.1)
England	529 (2.9)	82 (1.9)	529 (3.3)	78 (2.0)	528 (3.3)	85 (2.5)
Finland	570 (2.6)	67 (1.5)	570 (2.9)	64 (1.9)	570 (3.0)	68 (2.0)
Georgia	455 (3.8)	87 (2.2)	459 (3.2)	82 (2.3)	451 (5.1)	91 (2.6)
Germany	528 (2.9)	70 (1.3)	522 (3.0)	69 (1.8)	534 (3.2)	71 (2.0)
Hong Kong SAR	535 (3.8)	74 (4.3)	532 (3.6)	69 (3.9)	538 (4.3)	78 (4.9)
Hungary	534 (3.7)	86 (2.5)	532 (4.0)	84 (3.2)	537 (3.9)	89 (2.8)
Iran, Islamic Rep. of	453 (3.7)	99 (2.5)	452 (5.8)	98 (3.5)	454 (5.7)	101 (3.0)
Ireland	516 (3.4)	79 (1.8)	516 (4.0)	76 (2.0)	516 (4.6)	82 (2.4)
Italy	524 (2.7)	74 (1.7)	520 (3.2)	73 (2.1)	528 (3.0)	75 (1.9)
Japan	559 (1.9)	64 (1.3)	556 (2.7)	61 (1.3)	561 (2.1)	66 (2.0)
Kazakhstan	495 (5.1)	91 (2.5)	490 (5.1)	86 (2.4)	498 (5.5)	94 (3.0)
Korea, Rep. of	587 (2.0)	66 (0.8)	583 (2.4)	62 (1.1)	590 (2.3)	69 (1.1)
Kuwait	347 (4.7)	126 (1.6)	371 (5.5)	119 (2.0)	319 (7.1)	128 (2.9)
Lithuania	515 (2.4)	68 (1.3)	514 (2.4)	66 (1.7)	515 (3.0)	69 (2.0)
Malta	446 (1.9)	98 (1.2)	443 (2.2)	94 (1.6)	449 (2.8)	101 (1.8)
Morocco	264 (4.5)	128 (2.9)	268 (5.1)	127 (2.8)	259 (4.9)	129 (3.5)
Netherlands	531 (2.2)	53 (1.2)	526 (2.4)	52 (1.3)	537 (2.6)	53 (1.4)
New Zealand	497 (2.3)	86 (1.7)	496 (3.0)	83 (1.9)	497 (2.6)	88 (2.3)
Northern Ireland	517 (2.6)	71 (1.5)	517 (3.2)	69 (2.0)	516 (3.2)	74 (1.8)
Norway	494 (2.3)	63 (1.3)	492 (2.5)	62 (1.6)	496 (3.2)	65 (1.7)
Oman	377 (4.3)	124 (1.9)	394 (4.7)	116 (2.7)	360 (4.6)	129 (2.2)
Poland	505 (2.6)	78 (1.2)	502 (3.0)	75 (1.7)	508 (2.9)	81 (1.4)
Portugal	522 (3.9)	73 (2.1)	519 (4.6)	71 (2.9)	524 (3.8)	74 (2.2)
Qatar	394 (4.3)	127 (2.8)	408 (5.1)	120 (3.4)	382 (5.7)	131 (4.1)
Romania	505 (5.9)	107 (4.2)	505 (6.9)	107 (5.6)	506 (5.7)	106 (3.8)
Russian Federation	552 (3.5)	72 (1.5)	553 (3.5)	70 (1.8)	552 (3.8)	74 (1.9)
Saudi Arabia	429 (5.4)	107 (3.4)	453 (4.7)	91 (2.8)	405 (9.9)	118 (6.3)
Serbia	516 (3.1)	84 (2.1)	514 (3.6)	81 (3.0)	517 (3.7)	86 (2.4)
Singapore	583 (3.4)	87 (1.9)	581 (3.7)	84 (2.0)	585 (3.7)	89 (2.3)
Slovak Republic	532 (3.8)	79 (2.8)	528 (4.3)	79 (3.3)	536 (3.6)	79 (2.7)
Slovenia	520 (2.7)	76 (1.2)	517 (2.8)	74 (1.8)	523 (3.4)	77 (1.9)
Spain	505 (3.0)	73 (1.7)	500 (2.8)	72 (2.0)	510 (3.7)	74 (1.9)
Sweden	533 (2.7)	75 (1.3)	532 (3.0)	74 (2.3)	535 (3.2)	75 (1.5)
Thailand	472 (5.6)	94 (3.3)	476 (5.7)	88 (3.4)	467 (6.6)	100 (4.1)
Tunisia	346 (5.3)	117 (2.2)	359 (5.6)	112 (2.4)	334 (5.6)	120 (2.7)
Turkey	463 (4.5)	99 (3.5)	465 (5.0)	97 (4.3)	461 (4.7)	101 (3.5)
United Arab Emirates	428 (2.5)	112 (1.4)	437 (3.4)	103 (1.8)	419 (3.8)	119 (2.2)
United States	544 (2.1)	79 (1.2)	539 (2.3)	77 (1.2)	549 (2.1)	80 (1.5)
Yemen	209 (7.3)	117 (2.6)	225 (7.3)	115 (2.6)	198 (8.8)	117 (3.7)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

Appendix G.3: Standard Deviations of Science Achievement (Continued)

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Sixth Grade Participants						
Botswana	367 (5.5)	131 (2.9)	374 (5.8)	125 (2.9)	360 (6.4)	136 (3.4)
Honduras	432 (5.8)	85 (3.4)	429 (6.1)	83 (3.7)	436 (6.3)	87 (3.8)
Yemen	345 (7.0)	117 (2.7)	355 (8.8)	114 (4.4)	338 (8.4)	119 (2.9)
Benchmarking Participants						
Alberta, Canada	541 (2.4)	71 (1.8)	537 (2.9)	71 (2.4)	545 (2.8)	70 (1.9)
Ontario, Canada	528 (3.0)	77 (1.5)	525 (3.1)	73 (1.5)	530 (3.8)	80 (2.1)
Quebec, Canada	516 (2.7)	59 (1.1)	512 (3.0)	57 (1.4)	520 (3.0)	60 (1.3)
Abu Dhabi, UAE	411 (4.9)	109 (2.4)	427 (5.8)	99 (2.9)	396 (6.8)	117 (3.1)
Dubai, UAE	461 (2.3)	113 (1.8)	462 (3.8)	105 (2.4)	461 (4.7)	120 (2.3)
Florida, US	545 (3.7)	75 (1.7)	540 (3.8)	73 (1.9)	549 (4.3)	77 (2.3)
North Carolina, US	538 (4.6)	77 (2.2)	534 (5.1)	76 (2.5)	543 (4.9)	78 (2.5)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

Appendix G.4: Standard Deviations of Science Achievement

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Armenia	437 (3.1)	95 (1.4)	446 (3.5)	92 (1.7)	428 (3.6)	97 (1.7)
Australia	519 (4.8)	84 (3.0)	511 (4.5)	80 (2.7)	527 (6.5)	87 (3.9)
Bahrain	452 (2.0)	102 (1.8)	482 (2.2)	86 (1.7)	423 (3.6)	109 (2.3)
Chile	461 (2.5)	73 (1.4)	454 (3.2)	73 (2.0)	470 (2.9)	73 (1.6)
Chinese Taipei	564 (2.3)	84 (1.4)	564 (2.7)	78 (1.6)	564 (2.8)	88 (1.7)
England	533 (4.9)	85 (3.2)	534 (5.0)	80 (3.0)	532 (6.2)	88 (3.9)
Finland	552 (2.5)	65 (1.6)	555 (2.4)	62 (1.8)	550 (3.1)	68 (1.9)
Georgia	420 (3.0)	90 (1.6)	425 (3.3)	83 (1.8)	415 (3.5)	94 (2.1)
Ghana	306 (5.2)	112 (2.6)	290 (5.7)	111 (2.7)	320 (5.4)	112 (2.9)
Hong Kong SAR	535 (3.4)	75 (3.3)	536 (4.5)	72 (3.9)	534 (3.7)	78 (3.2)
Hungary	522 (3.1)	83 (2.0)	513 (3.5)	82 (2.7)	531 (3.7)	83 (3.0)
Indonesia	406 (4.5)	79 (2.6)	409 (5.1)	77 (3.0)	402 (4.5)	80 (2.8)
Iran, Islamic Rep. of	474 (4.0)	90 (1.8)	477 (5.3)	87 (2.5)	472 (5.3)	93 (2.8)
Israel	516 (4.0)	94 (2.2)	519 (3.7)	87 (2.0)	512 (5.2)	101 (2.9)
Italy	501 (2.5)	76 (1.6)	493 (3.1)	74 (1.7)	508 (2.6)	76 (2.2)
Japan	558 (2.4)	76 (1.5)	554 (2.9)	72 (1.6)	562 (2.9)	79 (2.0)
Jordan	449 (4.0)	103 (2.8)	471 (4.3)	87 (2.5)	428 (6.4)	112 (3.5)
Kazakhstan	490 (4.3)	79 (1.9)	492 (4.6)	76 (2.0)	488 (4.6)	82 (2.4)
Korea, Rep. of	560 (2.0)	77 (1.0)	558 (2.6)	74 (1.0)	563 (2.4)	81 (1.6)
Lebanon	406 (4.9)	98 (2.0)	404 (5.4)	94 (2.3)	408 (6.5)	101 (2.8)
Lithuania	514 (2.6)	76 (1.7)	518 (3.0)	73 (2.2)	510 (3.1)	79 (2.1)
Macedonia, Rep. of	407 (5.4)	114 (2.6)	417 (5.6)	112 (2.8)	399 (6.1)	115 (3.3)
Malaysia	426 (6.3)	101 (2.9)	434 (6.3)	95 (2.8)	419 (7.3)	107 (3.7)
Morocco	376 (2.2)	86 (1.1)	378 (2.6)	85 (1.4)	374 (2.7)	86 (1.5)
New Zealand	512 (4.6)	85 (2.0)	501 (4.6)	82 (2.6)	522 (5.1)	87 (2.2)
Norway	494 (2.6)	73 (1.5)	495 (3.2)	71 (1.9)	494 (3.0)	75 (1.8)
Oman	420 (3.2)	111 (2.0)	458 (2.9)	92 (1.6)	380 (4.4)	116 (2.2)
Palestinian Nat'l Auth.	420 (3.2)	105 (1.9)	434 (3.8)	97 (2.2)	406 (5.4)	111 (2.7)
Qatar	419 (3.4)	121 (2.5)	432 (7.0)	120 (2.8)	406 (5.4)	121 (3.4)
Romania	465 (3.5)	86 (2.1)	466 (3.8)	85 (2.2)	464 (4.0)	87 (2.5)
Russian Federation	542 (3.2)	77 (1.3)	539 (3.6)	74 (1.3)	546 (3.5)	79 (2.2)
Saudi Arabia	436 (3.9)	82 (1.8)	450 (3.5)	72 (1.4)	424 (6.4)	89 (2.7)
Singapore	590 (4.3)	97 (2.9)	589 (4.2)	90 (2.7)	591 (5.3)	103 (3.6)
Slovenia	543 (2.7)	76 (1.3)	541 (3.0)	73 (1.6)	545 (3.4)	78 (1.7)
Sweden	509 (2.5)	81 (1.2)	511 (2.7)	78 (1.5)	508 (3.1)	83 (1.6)
Syrian Arab Republic	426 (3.9)	84 (1.6)	424 (4.4)	83 (1.9)	429 (4.9)	85 (2.4)
Thailand	451 (3.9)	80 (2.3)	458 (3.9)	74 (2.5)	443 (5.2)	85 (2.6)
Tunisia	439 (2.5)	67 (1.4)	431 (2.6)	66 (1.5)	447 (2.9)	67 (1.7)
Turkey	483 (3.4)	103 (2.5)	491 (3.2)	99 (2.6)	475 (4.3)	106 (2.8)
Ukraine	501 (3.4)	83 (1.9)	499 (3.7)	78 (2.4)	503 (4.3)	88 (2.6)
United Arab Emirates	465 (2.4)	97 (1.3)	477 (2.9)	87 (1.3)	452 (3.3)	105 (2.0)
United States	525 (2.6)	81 (1.5)	519 (2.8)	79 (1.6)	530 (2.9)	83 (1.8)

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

() Standard errors appear in parentheses. Because of rounding some results may appear inconsistent.

Appendix G.4: Standard Deviations of Science Achievement (Continued)

Country	Overall		Girls		Boys	
	Mean	Standard Deviation	Mean	Standard Deviation	Mean	Standard Deviation
Ninth Grade Participants						
Botswana	404 (3.6)	104 (1.7)	410 (4.3)	100 (2.1)	399 (3.7)	107 (2.2)
Honduras	369 (4.0)	79 (2.2)	360 (4.6)	78 (2.5)	380 (4.1)	79 (2.2)
South Africa	332 (3.7)	114 (2.3)	335 (4.1)	111 (2.9)	328 (4.5)	116 (2.8)
Benchmarking Participants						
Alberta, Canada	546 (2.4)	68 (1.4)	542 (2.8)	67 (1.6)	549 (2.5)	69 (1.7)
Ontario, Canada	521 (2.5)	69 (1.5)	521 (2.6)	66 (1.5)	522 (3.0)	71 (2.1)
Quebec, Canada	520 (2.5)	67 (1.8)	518 (3.0)	65 (2.2)	522 (3.0)	68 (1.8)
Abu Dhabi, UAE	461 (4.0)	94 (2.3)	465 (4.5)	84 (2.4)	458 (6.0)	102 (3.1)
Dubai, UAE	485 (2.5)	103 (2.1)	500 (4.6)	88 (2.5)	472 (5.8)	113 (2.8)
Alabama, US	485 (6.2)	88 (2.7)	482 (6.3)	84 (2.5)	489 (6.8)	91 (3.5)
California, US	499 (4.6)	84 (2.5)	493 (5.0)	82 (2.4)	504 (5.0)	86 (3.1)
Colorado, US	542 (4.4)	78 (2.1)	537 (4.7)	75 (2.8)	548 (5.2)	80 (2.2)
Connecticut, US	532 (4.6)	88 (2.9)	530 (4.5)	83 (3.0)	533 (5.9)	92 (3.6)
Florida, US	530 (7.3)	85 (3.1)	522 (8.5)	81 (3.4)	537 (7.6)	88 (3.5)
Indiana, US	533 (4.8)	76 (2.0)	526 (4.9)	75 (2.3)	541 (5.4)	75 (2.6)
Massachusetts, US	567 (5.1)	81 (2.4)	564 (5.8)	81 (2.8)	570 (5.1)	81 (2.6)
Minnesota, US	553 (4.6)	72 (2.7)	548 (4.9)	70 (3.0)	559 (5.3)	74 (2.9)
North Carolina, US	532 (6.3)	82 (3.4)	526 (5.7)	79 (3.1)	537 (7.7)	85 (4.5)

SOURCE: IEA's Trends in International Mathematics and Science Study - TIMSS 2011

