

**Exhibit 3.11: Achievement in Science Cognitive Domains by Gender**

Country	Knowing		Applying		Reasoning	
	Girls	Boys	Girls	Boys	Girls	Boys
Australia	522 (3.6)	524 (4.2)	523 (3.5)	522 (3.6)	532 (3.8)	523 (3.9)
<sup>2</sup> Bahrain	475 (3.7) ▲	437 (3.5)	480 (4.1) ▲	444 (3.5)	475 (3.6) ▲	435 (3.8)
<sup>†</sup> Belgium (Flemish)	495 (3.2)	500 (3.5)	515 (3.0)	511 (2.5)	530 (3.5) ▲	521 (2.9)
Bulgaria	557 (6.9) ▲	546 (6.4)	539 (6.6)	533 (6.2)	516 (6.9) ▲	497 (6.4)
<sup>1 2</sup> Canada	522 (3.6)	524 (3.2)	529 (3.1)	526 (2.7)	530 (2.7) ▲	520 (2.9)
Chile	474 (3.4)	481 (3.8) ▲	478 (3.7)	473 (3.2)	477 (2.7)	476 (3.1)
Chinese Taipei	549 (2.9)	565 (3.0) ▲	548 (3.4)	558 (3.2) ▲	561 (5.0)	555 (3.3)
Croatia	530 (3.4)	538 (3.2) ▲	529 (3.0)	531 (3.0)	540 (3.7) ▲	531 (2.3)
Cyprus	466 (3.7)	469 (4.7)	489 (2.9)	489 (4.4)	491 (4.6)	488 (4.1)
Czech Republic	539 (3.6)	550 (3.7) ▲	525 (2.8)	531 (2.6)	526 (3.9)	531 (3.7)
<sup>2</sup> Denmark	517 (2.6)	531 (3.3) ▲	527 (2.9)	532 (2.8)	531 (3.1) ▲	520 (4.5)
England	530 (3.6)	537 (3.1)	539 (3.4)	536 (2.7)	543 (3.1)	534 (4.7)
Finland	560 (3.3) ▲	552 (3.5)	561 (2.6) ▲	545 (2.9)	559 (3.1) ▲	546 (2.6)
France	479 (4.3)	484 (4.0)	492 (3.6)	495 (3.4)	483 (3.7)	479 (2.7)
<sup>1</sup> Georgia	459 (4.4)	460 (5.0)	453 (4.9)	446 (5.7)	433 (5.4) ▲	418 (5.1)
Germany	524 (3.0)	530 (3.4)	529 (2.9)	529 (3.0)	534 (3.1)	530 (4.2)
<sup>†</sup> Hong Kong SAR	553 (3.8)	569 (3.8) ▲	549 (4.1)	558 (4.0) ▲	555 (6.1)	550 (4.0)
Hungary	545 (4.1)	555 (4.2) ▲	534 (4.0)	543 (4.0) ▲	533 (3.9)	533 (4.7)
Indonesia	402 (5.6)	394 (6.0)	396 (5.4)	388 (6.1)	399 (5.9) ▲	381 (6.9)
Iran, Islamic Rep. of	418 (5.5)	415 (5.7)	423 (6.1)	412 (5.8)	430 (6.8)	414 (6.3)
Ireland	523 (3.5)	534 (3.1) ▲	527 (3.2)	533 (3.1)	529 (3.8)	523 (3.5)
<sup>2</sup> Italy	516 (3.4)	525 (3.8) ▲	507 (3.9)	519 (3.2) ▲	512 (3.2)	511 (4.4)
Japan	537 (2.8)	550 (3.9) ▲	575 (2.6)	578 (2.5)	598 (1.9) ▲	591 (2.5)
Kazakhstan	551 (4.7)	550 (5.6)	550 (4.7) ▲	544 (5.1)	556 (4.9) ▲	547 (4.8)
Korea, Rep. of	572 (2.9)	591 (2.6) ▲	587 (2.7)	600 (2.0) ▲	595 (2.0)	593 (3.3)
ψ Kuwait	358 (7.2) ▲	329 (9.4)	339 (8.4) ▲	309 (9.1)	311 (8.9) ▲	283 (10.1)
<sup>2</sup> Lithuania	524 (3.1)	523 (3.8)	527 (2.7)	525 (3.1)	545 (3.8) ▲	531 (3.4)
ψ Morocco	330 (6.6)	332 (6.7)	366 (5.1) ▲	349 (5.8)	361 (5.6) ▲	347 (5.4)
<sup>†</sup> Netherlands	507 (2.5)	510 (3.2)	520 (2.6)	517 (2.8)	528 (2.2)	523 (5.0)
New Zealand	505 (3.6)	503 (2.9)	502 (3.9)	502 (3.3)	521 (3.7) ▲	507 (3.2)
‡ Northern Ireland	516 (3.8)	521 (3.3)	518 (3.2)	520 (3.9)	524 (3.1)	516 (4.1)
Norway (5)	531 (3.1)	534 (3.4)	541 (3.3)	542 (3.5)	540 (4.6) ▲	533 (3.8)
Oman	438 (3.4) ▲	406 (4.1)	449 (3.3) ▲	420 (3.4)	449 (3.5) ▲	413 (3.7)
Poland	542 (3.1)	545 (3.0)	555 (2.9)	553 (3.4)	547 (2.8) ▲	537 (4.3)
<sup>2</sup> Portugal	502 (3.5)	511 (3.2) ▲	504 (2.5)	513 (2.2) ▲	506 (2.1)	505 (2.6)
Qatar	445 (5.3) ▲	429 (6.3)	445 (5.3) ▲	415 (6.4)	448 (5.5) ▲	418 (6.1)
Russian Federation	565 (4.0)	572 (4.7)	569 (3.5)	567 (3.5)	565 (4.0) ▲	556 (4.3)
Saudi Arabia	430 (5.5) ▲	360 (9.5)	431 (5.4) ▲	346 (8.2)	410 (7.3) ▲	322 (8.4)
<sup>3</sup> Serbia	526 (3.8)	527 (5.2)	523 (3.9)	521 (6.2)	524 (5.1)	517 (4.9)
<sup>2</sup> Singapore	569 (4.2)	579 (5.1) ▲	598 (4.3)	600 (4.4)	610 (4.3) ▲	600 (3.7)
Slovak Republic	525 (3.8)	534 (3.4) ▲	514 (3.2)	520 (3.2) ▲	502 (4.2)	512 (3.0) ▲
Slovenia	533 (3.1)	549 (2.9) ▲	543 (3.1)	549 (3.4)	539 (3.1)	537 (3.2)
<sup>2</sup> Spain	517 (3.5)	527 (3.5) ▲	511 (3.5)	517 (3.5) ▲	516 (3.5)	518 (3.2)
<sup>2</sup> Sweden	539 (3.8)	538 (4.4)	546 (3.9) ▲	534 (4.2)	548 (4.5)	536 (5.4)
Turkey	475 (3.5)	480 (3.2)	486 (3.3)	486 (3.8)	489 (3.6) ▲	478 (4.1)
United Arab Emirates	459 (5.2)	448 (4.6)	459 (4.5) ▲	445 (4.3)	453 (4.8) ▲	437 (3.9)
<sup>2</sup> † United States	545 (2.6)	552 (2.8) ▲	544 (2.4)	548 (2.6)	542 (2.4)	541 (3.5)
International Avg.	504 (0.6)	505 (0.7)	508 (0.6) ▲	504 (0.6)	510 (0.6) ▲	498 (0.7)

▲ Average significantly higher than other gender

ψ Reservations about reliability because the percentage of students with achievement too low for estimation exceeds 15% but does not exceed 25%.

See Appendix C.1 for target population coverage notes 1, 2, and 3. See Appendix C.7 for sampling guidelines and sampling participation notes †, ‡, and §.

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

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015

**Exhibit 3.11: Achievement in Science Cognitive Domains by Gender (Continued)**

Country	Knowing		Applying		Reasoning	
	Girls	Boys	Girls	Boys	Girls	Boys
<b>Benchmarking Participants</b>						
Buenos Aires, Argentina	415 (5.8)	418 (5.0)	418 (5.9)	415 (4.5)	424 (6.1)	408 (5.4) <sup>▲</sup>
Ontario, Canada	528 (3.4)	527 (3.4)	538 (3.1)	531 (2.9)	536 (2.8)	522 (3.4) <sup>▲</sup>
‡ Quebec, Canada	521 (4.5)	527 (5.0)	525 (4.6)	526 (5.1)	528 (4.9)	524 (5.0)
Norway (4)	492 (3.3)	497 (3.9)	496 (3.0)	492 (3.1)	486 (3.4)	479 (3.9) <sup>▲</sup>
<sup>2</sup> Abu Dhabi, UAE	416 (10.2)	405 (9.5)	425 (9.1)	410 (8.4)	421 (9.2)	404 (8.1)
Dubai, UAE	528 (4.2)	518 (4.1)	523 (3.7)	512 (4.4)	517 (4.1)	503 (4.1) <sup>▲</sup>
<sup>1</sup> Florida, US	554 (6.7)	553 (5.9)	552 (5.4)	547 (5.8)	549 (7.6)	533 (6.4) <sup>▲</sup>

▲ Average significantly higher than other gender

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2015