

Table 401.—Average 8th-grade science scores by content areas, and average time spent studying out of school, by country: 1999

Country	Average achievement scale score							Distribution of daily out-of-school study time in science, with mean science scores					
	Overall science scores	Earth science	Life science	Physics	Chemistry	Environmental and resource issues	Scientific inquiry and the nature of science	No time		Less than 1 hour		One hour or more	
								Percent	Mean score	Percent	Mean score	Percent	Mean score
1	2	3	4	5	6	7	8	9	10	11	12	13	14
International average¹	488 (0.7)	488 (0.9)	488 (0.7)	488 (0.9)	488 (0.8)	488 (0.7)	488 (0.7)	14 (0.2)	462 (1.2)	49 (0.2)	495 (1.0)	36 (0.2)	486 (1.0)
Australia	540 (4.4)	519 (6.1)	530 (4.4)	531 (6.3)	520 (5.0)	530 (6.3)	535 (4.9)	21 (1.4)	510 (6.6)	65 (1.4)	553 (4.4)	14 (0.8)	533 (6.9)
Belgium (Flemish)	535 (3.1)	533 (3.5)	535 (4.6)	530 (3.5)	508 (3.3)	513 (3.5)	526 (4.9)	14 (1.1)	537 (8.7)	55 (1.2)	543 (4.0)	31 (1.4)	520 (3.9)
Bulgaria	518 (5.4)	520 (5.7)	514 (6.9)	505 (5.8)	527 (5.7)	483 (6.4)	479 (5.6)	17 (1.6)	505 (8.7)	38 (1.2)	523 (6.7)	45 (1.5)	528 (7.0)
Canada	533 (2.1)	519 (3.7)	523 (3.8)	521 (3.8)	521 (5.4)	521 (3.5)	532 (5.1)	20 (1.0)	525 (4.1)	62 (0.9)	541 (2.3)	18 (0.7)	515 (4.4)
Chile	420 (3.7)	435 (7.0)	431 (3.7)	428 (5.6)	435 (5.2)	449 (4.8)	441 (4.7)	17 (0.7)	415 (4.9)	53 (0.8)	431 (4.7)	30 (1.0)	417 (5.4)
Chinese Taipei	569 (4.4)	538 (3.0)	550 (3.3)	552 (3.9)	563 (4.3)	567 (4.0)	540 (4.9)	38 (1.3)	530 (5.7)	42 (0.9)	588 (4.4)	20 (0.9)	607 (4.7)
Cyprus	460 (2.4)	459 (5.4)	468 (3.8)	459 (2.9)	470 (3.4)	475 (4.3)	467 (4.6)	18 (0.7)	425 (6.6)	57 (0.9)	474 (3.1)	25 (1.0)	461 (5.0)
Czech Republic	539 (4.2)	533 (6.9)	544 (4.1)	526 (4.2)	512 (5.2)	516 (5.7)	522 (5.7)	18 (1.1)	529 (7.0)	62 (1.2)	546 (4.5)	20 (1.1)	530 (5.0)
England	538 (4.8)	525 (3.9)	533 (6.2)	528 (4.5)	524 (5.5)	518 (5.8)	538 (5.1)	—	—	—	—	—	—
Finland	535 (3.5)	520 (5.5)	520 (4.0)	520 (4.4)	535 (4.5)	514 (7.1)	528 (4.0)	8 (0.8)	514 (9.7)	84 (0.9)	541 (3.5)	8 (0.6)	511 (10.8)
Hong Kong	530 (3.7)	506 (4.3)	516 (5.5)	523 (4.9)	515 (5.2)	518 (4.9)	531 (2.8)	39 (1.3)	513 (4.2)	48 (1.0)	543 (4.0)	13 (0.6)	539 (6.6)
Hungary	552 (3.7)	560 (3.9)	535 (4.0)	543 (4.3)	548 (4.7)	501 (6.6)	526 (5.9)	6 (0.6)	505 (8.6)	49 (1.2)	558 (4.0)	45 (1.3)	554 (4.0)
Indonesia	435 (4.5)	431 (6.4)	448 (3.6)	452 (5.5)	425 (3.9)	489 (4.8)	446 (4.3)	13 (0.8)	432 (6.7)	40 (0.9)	442 (4.9)	47 (1.1)	435 (5.9)
Iran, Islamic Republic	448 (3.8)	459 (5.2)	437 (3.7)	445 (5.7)	487 (4.1)	470 (5.5)	446 (5.3)	3 (0.3)	432 (16.0)	29 (1.0)	453 (4.1)	68 (1.1)	451 (4.6)
Israel ²	468 (4.9)	472 (5.2)	463 (4.0)	484 (5.3)	479 (4.7)	458 (4.0)	476 (8.3)	17 (0.8)	449 (7.8)	60 (1.1)	487 (4.6)	23 (1.1)	450 (6.5)
Italy	493 (3.9)	502 (5.9)	488 (4.6)	480 (4.1)	493 (4.8)	491 (5.4)	489 (4.6)	7 (0.7)	435 (8.6)	48 (1.4)	501 (4.3)	45 (1.4)	498 (4.3)
Japan	550 (2.2)	533 (6.2)	534 (5.4)	544 (2.9)	530 (3.1)	506 (5.5)	543 (2.8)	39 (1.4)	535 (3.2)	50 (1.2)	560 (2.3)	12 (0.7)	555 (7.5)
Jordan	450 (3.8)	446 (3.5)	448 (4.1)	459 (3.6)	483 (5.5)	476 (6.0)	440 (5.5)	7 (0.5)	396 (9.2)	37 (1.0)	466 (5.0)	56 (1.1)	465 (3.7)
Korea	549 (2.6)	532 (2.7)	528 (3.6)	544 (5.1)	523 (3.7)	523 (4.5)	545 (7.3)	45 (0.8)	527 (2.9)	42 (0.7)	564 (3.1)	13 (0.6)	578 (4.6)
Latvia (Latvian-speaking schools) ²	503 (4.8)	495 (5.4)	509 (3.9)	495 (3.9)	490 (3.7)	493 (5.2)	495 (4.7)	9 (0.6)	480 (9.9)	66 (1.0)	509 (5.4)	25 (1.0)	496 (6.3)
Lithuania ²	488 (4.1)	476 (4.4)	494 (4.6)	510 (4.3)	485 (4.6)	458 (5.1)	483 (6.4)	10 (0.9)	456 (8.2)	66 (1.2)	493 (4.8)	25 (1.2)	494 (4.9)
Macedonia, Republic of	458 (5.2)	464 (4.2)	468 (4.9)	463 (6.0)	481 (6.1)	432 (4.2)	464 (3.6)	3 (0.3)	428 (15.3)	25 (1.0)	453 (5.9)	72 (1.2)	470 (5.3)
Malaysia	492 (4.4)	491 (4.2)	479 (5.4)	494 (4.1)	485 (3.5)	502 (4.4)	488 (4.5)	4 (0.3)	460 (10.6)	36 (1.1)	493 (5.1)	60 (1.2)	495 (4.9)
Moldova	459 (4.0)	466 (4.2)	477 (3.9)	457 (5.5)	451 (5.6)	444 (6.2)	471 (3.8)	7 (0.6)	439 (10.8)	29 (1.0)	460 (5.8)	63 (1.2)	467 (4.2)
Morocco	323 (4.3)	363 (3.3)	347 (2.8)	352 (4.2)	372 (4.8)	396 (5.1)	391 (4.2)	14 (0.8)	323 (12.4)	35 (1.2)	330 (4.9)	51 (1.7)	335 (6.4)
Netherlands	545 (6.9)	534 (7.2)	536 (7.2)	537 (6.5)	515 (6.4)	526 (8.5)	534 (6.5)	6 (0.8)	530 (11.6)	80 (1.5)	555 (6.4)	15 (1.3)	507 (12.9)
New Zealand	510 (4.9)	504 (5.8)	501 (5.6)	499 (4.7)	503 (4.9)	503 (5.2)	521 (6.8)	18 (1.1)	472 (6.8)	66 (1.2)	528 (4.8)	15 (1.0)	491 (7.7)
Philippines	345 (7.5)	390 (5.0)	378 (5.7)	393 (6.3)	394 (6.5)	391 (7.6)	403 (5.5)	5 (0.4)	294 (14.4)	41 (0.8)	365 (9.7)	54 (0.9)	348 (7.7)
Romania	472 (5.8)	475 (5.5)	475 (6.0)	465 (6.8)	481 (6.1)	473 (6.6)	456 (5.5)	16 (0.9)	451 (8.4)	36 (1.0)	479 (7.8)	48 (1.3)	484 (5.6)
Russian Federation	529 (6.4)	529 (5.1)	517 (6.5)	529 (6.3)	523 (8.0)	495 (6.6)	491 (4.9)	5 (0.4)	494 (8.4)	34 (1.3)	534 (7.1)	61 (1.3)	536 (6.4)
Singapore	568 (8.0)	521 (7.3)	541 (7.2)	570 (6.7)	545 (8.3)	577 (8.3)	550 (5.9)	7 (0.6)	507 (13.2)	38 (1.1)	573 (9.9)	55 (1.2)	573 (7.1)
Slovak Republic	535 (3.3)	537 (4.3)	535 (6.2)	518 (4.1)	525 (4.9)	512 (4.5)	507 (3.9)	8 (0.7)	521 (7.5)	67 (1.2)	539 (3.7)	25 (1.2)	532 (4.8)
Slovenia	533 (3.2)	541 (4.3)	521 (3.9)	525 (4.4)	509 (5.4)	519 (3.4)	513 (4.3)	10 (0.8)	526 (6.7)	52 (1.1)	546 (3.7)	38 (1.1)	521 (4.2)
South Africa	243 (7.8)	348 (4.8)	289 (7.3)	308 (6.7)	350 (4.0)	350 (8.5)	329 (6.4)	15 (1.8)	211 (14.0)	39 (1.1)	269 (11.1)	47 (1.3)	237 (8.7)
Thailand	482 (4.0)	470 (3.9)	508 (4.5)	475 (4.2)	439 (4.3)	507 (3.0)	462 (4.2)	8 (0.5)	455 (4.8)	50 (1.1)	480 (4.8)	42 (1.2)	493 (5.2)
Tunisia	430 (3.4)	442 (2.7)	441 (5.0)	425 (6.3)	439 (3.7)	462 (5.0)	451 (3.4)	13 (0.8)	438 (8.2)	39 (0.9)	434 (5.3)	48 (1.0)	425 (2.8)
Turkey	433 (4.3)	435 (4.6)	444 (4.5)	441 (4.0)	437 (5.0)	461 (3.6)	445 (6.3)	6 (0.5)	409 (12.9)	44 (0.9)	433 (4.0)	51 (1.2)	444 (4.4)
United States	515 (4.6)	504 (4.2)	520 (4.1)	498 (5.5)	508 (4.8)	509 (6.4)	522 (4.3)	24 (1.4)	495 (6.4)	60 (1.3)	532 (4.6)	16 (0.8)	502 (5.9)

—Not available.

¹ Data are for 8th grade or equivalent in most countries.

² Countries not meeting all International Association for the Evaluation of Educational Achievement's sampling specifications.

SOURCE: InternatThird International Mathematics and Science Study 1999, *International Science Report*, by Michael O. Martin et al. Copyright © 2000 International Association for the Evaluation of Educational Achievement (IEA). (This table was prepared June 2001.)

NOTE: Standard errors appear in parentheses. Because results are rounded to the nearest whole number some totals may appear inconsistent.