

REFERENCE

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Students' Backgrounds and Attitudes Towards Mathematics



	Have All Three Educational Aids		Do Not Have All Three Educational Aids		Percentage of Students		
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Have Dictionary	Have Study Desk/Table for Own Use	Have Computer
Countries							
United States	74 (1.3)	518 (3.7)	26 (1.3)	463 (4.3)	97 (0.3)	90 (0.5)	80 (1.2)
Belgium (Flemish)	82 (1.2)	567 (3.3)	18 (1.2)	520 (8.6)	98 (0.7)	96 (0.6)	86 (1.0)
Canada	78 (0.8)	537 (2.6)	22 (0.8)	510 (3.1)	98 (0.2)	91 (0.6)	85 (0.8)
Chinese Taipei	61 (1.1)	608 (3.8)	39 (1.1)	551 (4.4)	98 (0.2)	94 (0.4)	63 (1.0)
Czech Republic	43 (1.2)	541 (4.5)	57 (1.2)	504 (4.6)	94 (0.8)	91 (0.7)	47 (1.2)
England	79 (0.9)	507 (4.0)	21 (0.9)	461 (6.0)	98 (0.3)	92 (0.6)	85 (0.8)
Hong Kong, SAR	57 (1.3)	592 (4.1)	43 (1.3)	571 (4.9)	99 (0.1)	75 (0.9)	72 (1.3)
Italy	59 (1.1)	492 (4.0)	41 (1.1)	461 (4.2)	98 (0.3)	93 (0.6)	63 (1.0)
Japan	52 (1.0)	592 (2.3)	48 (1.0)	566 (2.3)	99 (0.1)	97 (0.2)	52 (0.9)
Korea, Rep. of	65 (0.9)	602 (1.7)	35 (0.9)	561 (3.0)	99 (0.2)	96 (0.2)	67 (0.9)
Netherlands	94 (1.0)	543 (7.2)	6 (1.0)	509 (8.7)	100 (0.2)	99 (0.2)	96 (1.0)
Russian Federation	19 (1.2)	537 (6.6)	81 (1.2)	524 (6.3)	88 (1.3)	92 (0.8)	22 (1.2)
Singapore	75 (1.4)	615 (6.1)	25 (1.4)	573 (7.1)	99 (0.2)	92 (0.5)	80 (1.3)
States							
Connecticut	82 (2.0)	523 (8.5)	18 (2.0)	466 (10.2)	97 (0.3)	92 (0.9)	88 (1.7)
Idaho	75 (2.3)	507 (6.6)	25 (2.3)	464 (9.4)	94 (0.9)	90 (0.9)	82 (2.1)
Illinois	75 (2.1)	523 (6.9)	25 (2.1)	470 (6.1)	98 (0.5)	91 (0.8)	80 (2.1)
Indiana	74 (2.0)	525 (7.3)	26 (2.0)	487 (7.8)	97 (0.4)	90 (1.2)	81 (1.5)
Maryland	80 (1.6)	506 (5.8)	20 (1.6)	452 (7.6)	98 (0.3)	91 (0.9)	86 (1.4)
Massachusetts	82 (1.8)	522 (5.7)	18 (1.8)	475 (8.0)	98 (0.3)	93 (0.7)	87 (1.6)
Michigan	79 (1.9)	527 (6.5)	21 (1.9)	481 (9.8)	98 (0.3)	90 (0.9)	85 (1.7)
Missouri	69 (2.0)	504 (5.2)	31 (2.0)	461 (5.9)	96 (0.6)	90 (0.6)	76 (1.8)
North Carolina	68 (2.0)	510 (7.1)	32 (2.0)	463 (6.6)	97 (0.4)	89 (0.9)	74 (1.8)
Oregon	79 (2.0)	526 (5.1)	21 (2.0)	473 (7.7)	97 (0.6)	91 (1.0)	86 (1.7)
Pennsylvania	78 (2.4)	518 (6.0)	22 (2.4)	472 (6.4)	98 (0.7)	91 (1.1)	83 (2.0)
South Carolina	67 (2.2)	519 (7.1)	33 (2.2)	468 (7.6)	97 (0.4)	89 (1.0)	75 (2.2)
Texas	65 (3.6)	546 (6.7)	35 (3.6)	469 (9.6)	95 (0.7)	86 (1.7)	73 (3.3)
Districts and Consortia							
Academy School Dist. #20, CO	92 (0.8)	532 (2.0)	8 (0.8)	495 (8.4)	99 (0.3)	96 (0.6)	96 (0.5)
Chicago Public Schools, IL	54 (1.9)	474 (7.2)	46 (1.9)	450 (5.9)	98 (0.5)	85 (1.5)	61 (1.7)
Delaware Science Coalition, DE	76 (2.1)	492 (9.3)	24 (2.1)	443 (7.9)	97 (0.6)	90 (1.1)	82 (1.6)
First in the World Consort., IL	91 (1.2)	564 (5.8)	9 (1.2)	520 (12.7)	98 (0.3)	95 (1.2)	96 (0.6)
Fremont/Lincoln/WestSide PS, NE	77 (1.8)	503 (8.6)	23 (1.8)	439 (9.9)	96 (0.9)	92 (1.0)	81 (1.6)
Guilford County, NC	76 (1.8)	527 (7.1)	24 (1.8)	470 (9.8)	98 (0.5)	92 (1.1)	81 (1.6)
Jersey City Public Schools, NJ	49 (2.8)	494 (11.0)	51 (2.8)	460 (6.1)	96 (0.7)	81 (1.4)	58 (2.3)
Miami-Dade County PS, FL	58 (3.0)	445 (10.3)	42 (3.0)	391 (8.7)	95 (0.8)	84 (1.4)	66 (2.8)
Michigan Invitational Group, MI	82 (1.2)	540 (5.5)	18 (1.2)	500 (9.6)	97 (0.5)	91 (1.0)	89 (1.6)
Montgomery County, MD	86 (1.9)	548 (4.1)	14 (1.9)	476 (7.8)	99 (0.4)	93 (0.9)	91 (1.4)
Naperville Sch. Dist. #203, IL	96 (0.6)	570 (2.7)	4 (0.6)	551 (13.8)	99 (0.3)	97 (0.5)	98 (0.4)
Project SMART Consortium, OH	76 (1.5)	530 (8.1)	24 (1.5)	492 (5.9)	98 (0.6)	91 (1.1)	83 (1.2)
Rochester City Sch. Dist., NY	52 (2.5)	458 (9.1)	48 (2.5)	436 (6.2)	94 (0.7)	83 (1.4)	61 (2.3)
SW Math/Sci. Collaborative, PA	75 (2.1)	530 (6.6)	25 (2.1)	476 (10.0)	98 (0.4)	90 (0.9)	82 (1.9)
International Avg. (All Countries)	41 (0.2)	516 (1.2)	59 (0.2)	471 (0.8)	90 (0.1)	86 (0.1)	45 (0.2)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.



Exhibit R1.2 Number of Books in the Home

	Three or More Bookcases (More Than 200 Books)		About Two Bookcases (101-200 Books)		About One Bookcase (26-100 Books)		About One Shelf (11-25 Books)		None or Very Few (0-10 Books)	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Countries										
United States	28 (1.2)	537 (5.5)	22 (0.6)	523 (3.5)	29 (0.8)	495 (3.1)	14 (0.7)	461 (5.0)	8 (0.6)	439 (5.2)
Belgium (Flemish)	14 (0.8)	580 (5.1)	14 (0.6)	578 (7.3)	31 (1.3)	569 (6.1)	21 (0.7)	549 (5.1)	19 (1.3)	523 (4.9)
Canada	31 (0.9)	543 (3.5)	24 (0.8)	536 (3.5)	28 (0.7)	527 (3.3)	11 (0.5)	507 (5.1)	5 (0.3)	510 (5.9)
Chinese Taipei	16 (0.8)	637 (5.8)	12 (0.5)	629 (5.7)	31 (0.7)	599 (4.4)	23 (0.7)	563 (4.0)	17 (0.9)	513 (4.4)
Czech Republic	28 (1.4)	539 (5.0)	30 (1.4)	532 (5.6)	34 (1.1)	506 (5.1)	7 (0.8)	472 (7.2)	1 (0.2)	~ ~
England	26 (1.2)	537 (6.1)	23 (0.8)	505 (4.9)	32 (1.1)	488 (3.8)	13 (0.8)	456 (5.8)	7 (0.7)	438 (9.7)
Hong Kong, SAR	8 (0.5)	588 (8.8)	10 (0.5)	590 (7.4)	27 (0.7)	592 (4.3)	27 (0.7)	584 (5.0)	28 (0.9)	568 (4.3)
Italy	20 (0.9)	505 (5.6)	15 (0.7)	495 (4.9)	28 (0.9)	487 (4.5)	25 (0.9)	460 (5.4)	12 (0.8)	444 (7.0)
Japan	18 (0.7)	605 (4.6)	18 (0.6)	598 (4.0)	31 (0.7)	577 (2.7)	19 (0.6)	565 (4.3)	14 (0.6)	549 (4.8)
Korea, Rep. of	20 (0.8)	625 (2.9)	23 (0.6)	605 (3.1)	36 (0.7)	581 (2.2)	10 (0.5)	550 (3.8)	10 (0.4)	527 (5.1)
Netherlands	24 (1.8)	564 (8.5)	23 (1.2)	551 (8.1)	31 (1.1)	540 (8.2)	15 (1.4)	512 (9.6)	8 (1.4)	499 (11.1)
Russian Federation	23 (1.5)	556 (6.3)	29 (1.1)	539 (5.5)	31 (1.3)	517 (5.3)	13 (1.0)	485 (9.0)	4 (0.5)	460 (16.2)
Singapore	12 (0.6)	618 (8.3)	14 (0.7)	627 (9.0)	40 (1.1)	613 (6.1)	22 (1.0)	586 (6.8)	12 (0.8)	572 (7.2)
States										
Connecticut	35 (2.7)	544 (8.4)	23 (0.9)	519 (8.5)	25 (1.3)	507 (7.8)	10 (1.4)	461 (9.6)	8 (1.4)	436 (14.6)
Idaho	32 (1.6)	518 (8.0)	23 (1.1)	511 (6.1)	27 (1.4)	491 (7.2)	11 (1.2)	453 (9.7)	7 (1.0)	412 (11.2)
Illinois	29 (2.5)	542 (7.6)	23 (0.9)	522 (7.1)	30 (1.6)	499 (6.2)	12 (1.1)	464 (7.5)	6 (0.8)	452 (6.0)
Indiana	30 (2.2)	542 (7.8)	23 (1.0)	527 (7.8)	28 (1.2)	508 (6.6)	11 (1.3)	479 (6.7)	8 (1.0)	447 (9.5)
Maryland	31 (1.8)	531 (6.1)	23 (0.8)	508 (6.1)	27 (1.0)	481 (5.9)	13 (0.8)	452 (8.9)	7 (0.8)	433 (10.7)
Massachusetts	32 (1.9)	543 (6.2)	23 (1.1)	518 (5.7)	27 (1.1)	508 (5.8)	11 (1.1)	476 (7.6)	7 (1.1)	445 (8.6)
Michigan	36 (1.9)	544 (7.4)	24 (1.0)	523 (7.0)	26 (0.9)	508 (7.1)	10 (1.1)	467 (8.5)	5 (0.7)	461 (9.7)
Missouri	26 (1.6)	511 (6.9)	21 (1.3)	506 (5.3)	31 (1.2)	490 (6.1)	13 (0.8)	461 (9.3)	10 (0.8)	443 (8.4)
North Carolina	23 (1.8)	525 (8.3)	24 (0.9)	517 (8.0)	32 (1.3)	486 (6.4)	15 (1.1)	463 (6.1)	7 (0.7)	439 (8.6)
Oregon	33 (2.1)	546 (6.9)	23 (1.0)	528 (5.2)	27 (1.1)	499 (5.2)	10 (1.4)	472 (9.2)	6 (0.8)	436 (11.0)
<i>Pennsylvania</i>	28 (2.2)	537 (8.6)	25 (0.8)	521 (5.9)	30 (1.7)	496 (5.7)	11 (1.0)	468 (8.1)	6 (0.7)	448 (7.3)
South Carolina	23 (1.3)	540 (10.4)	21 (1.1)	524 (8.1)	30 (1.1)	499 (7.3)	16 (0.9)	460 (8.8)	9 (0.9)	439 (4.4)
<i>Texas</i>	20 (2.1)	575 (7.0)	19 (1.5)	543 (6.7)	30 (1.6)	524 (7.9)	16 (1.4)	479 (9.1)	15 (2.1)	448 (9.0)
Districts and Consortia										
Academy School Dist. #20, CO	46 (1.2)	544 (2.2)	25 (1.2)	526 (4.1)	21 (1.1)	516 (4.9)	5 (0.5)	497 (10.2)	3 (0.5)	461 (13.5)
Chicago Public Schools, IL	17 (2.6)	474 (9.2)	18 (1.6)	481 (6.9)	35 (1.8)	463 (7.0)	21 (1.8)	451 (5.7)	10 (1.2)	435 (10.1)
Delaware Science Coalition, DE	28 (2.1)	518 (9.2)	21 (1.5)	502 (11.0)	27 (1.5)	481 (7.1)	14 (1.3)	435 (8.3)	10 (1.3)	399 (10.6)
First in the World Consort., IL	41 (2.2)	570 (8.5)	28 (2.0)	570 (7.6)	23 (1.7)	555 (8.2)	5 (0.9)	493 (11.8)	3 (0.9)	478 (20.1)
Fremont/Lincoln/WestSide PS, NE	32 (1.7)	504 (9.6)	23 (1.0)	513 (10.3)	27 (2.2)	485 (8.0)	8 (0.8)	436 (13.5)	10 (1.2)	436 (12.0)
Guilford County, NC	29 (2.3)	555 (8.0)	25 (1.1)	523 (8.8)	29 (1.7)	493 (8.4)	12 (1.8)	478 (10.4)	5 (0.9)	439 (13.5)
Jersey City Public Schools, NJ	12 (1.4)	488 (17.4)	16 (1.3)	497 (11.1)	33 (1.9)	489 (8.5)	23 (1.8)	466 (8.7)	16 (1.8)	434 (7.2)
Miami-Dade County PS, FL	14 (2.6)	470 (19.3)	14 (1.3)	456 (9.8)	31 (1.2)	428 (8.5)	25 (2.1)	403 (10.7)	17 (1.8)	378 (11.7)
Michigan Invitational Group, MI	37 (2.7)	545 (7.1)	26 (2.0)	535 (6.4)	27 (1.8)	525 (7.4)	6 (0.8)	513 (11.8)	4 (0.7)	481 (13.2)
Montgomery County, MD	41 (2.3)	563 (5.0)	21 (1.8)	554 (8.3)	24 (1.2)	520 (4.7)	8 (1.2)	486 (8.6)	6 (0.9)	454 (11.3)
Naperville Sch. Dist. #203, IL	49 (1.4)	579 (4.5)	28 (1.2)	566 (3.6)	18 (1.1)	560 (5.1)	4 (0.5)	542 (7.2)	1 (0.3)	~ ~
Project SMART Consortium, OH	26 (2.3)	544 (11.4)	24 (1.3)	532 (9.5)	32 (1.3)	519 (7.2)	11 (1.4)	493 (6.9)	8 (0.9)	454 (7.6)
Rochester City Sch. Dist., NY	17 (2.1)	478 (13.9)	15 (1.0)	471 (10.1)	28 (1.6)	452 (7.3)	21 (1.9)	423 (7.1)	19 (1.5)	419 (8.0)
SW Math/Sci. Collaborative, PA	28 (2.5)	548 (7.6)	23 (1.2)	532 (7.3)	31 (1.9)	510 (6.9)	11 (1.3)	474 (10.4)	6 (1.3)	433 (12.1)
International Avg. (All Countries)	18 (0.2)	515 (1.3)	16 (0.1)	509 (1.1)	29 (0.2)	492 (0.8)	22 (0.1)	464 (0.9)	14 (0.2)	443 (1.6)

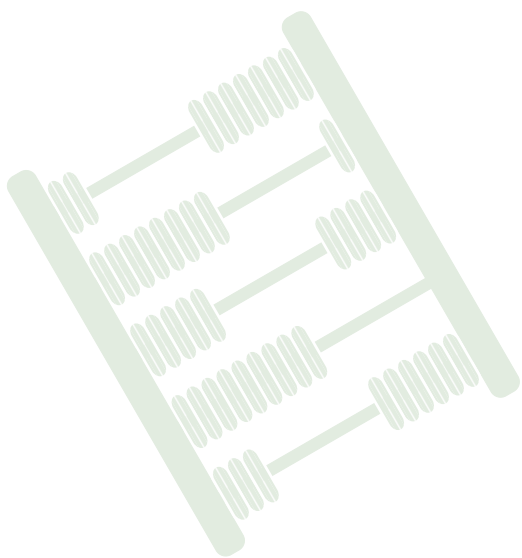
SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

A tilde (~) indicates insufficient data to report achievement.



	Finished University ¹		Finished Upper Secondary School But Not University ²		Finished Primary School But Not Upper Secondary School ³		Did Not Finish Primary School ⁴		Do Not Know	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Countries										
United States	35 (1.7)	535 (4.9)	46 (1.3)	496 (3.2)	5 (0.4)	456 (5.4)	1 (0.2)	~ ~	13 (0.7)	468 (5.6)
Belgium (Flemish)	16 (1.0)	595 (6.9)	45 (0.9)	568 (3.8)	10 (0.7)	540 (6.3)	0 (0.1)	~ ~	29 (1.0)	534 (4.2)
Canada	45 (1.3)	543 (3.5)	34 (1.0)	530 (2.8)	6 (0.5)	509 (8.1)	0 (0.1)	~ ~	15 (0.7)	506 (4.0)
Chinese Taipei	15 (1.0)	635 (6.5)	64 (0.8)	590 (3.8)	14 (0.7)	550 (4.8)	1 (0.1)	~ ~	7 (0.4)	527 (7.5)
Czech Republic	22 (1.2)	555 (6.2)	46 (1.3)	527 (4.5)	21 (1.2)	503 (5.5)	0 (0.0)	~ ~	11 (0.9)	480 (7.1)
England	--	--	--	--	--	--	--	--	--	--
Hong Kong, SAR	7 (0.7)	607 (8.5)	38 (1.0)	591 (4.3)	32 (0.9)	583 (4.2)	9 (0.7)	558 (7.6)	13 (0.6)	568 (5.7)
Italy	10 (0.8)	513 (6.4)	45 (1.3)	499 (3.6)	40 (1.5)	455 (4.5)	2 (0.3)	~ ~	3 (0.4)	453 (12.0)
Japan	--	--	--	--	--	--	--	--	--	--
Korea, Rep. of	25 (1.0)	620 (2.5)	48 (0.8)	587 (2.7)	14 (0.5)	566 (3.2)	5 (0.4)	559 (6.1)	8 (0.4)	545 (4.3)
Netherlands	12 (1.1)	572 (9.8)	53 (2.4)	553 (6.8)	7 (1.0)	518 (12.6)	1 (0.5)	~ ~	27 (2.1)	516 (9.1)
Russian Federation	33 (1.4)	551 (6.4)	47 (1.2)	522 (6.4)	5 (0.5)	488 (10.2)	1 (0.2)	~ ~	14 (0.9)	504 (6.1)
Singapore	11 (1.0)	652 (8.4)	51 (1.0)	608 (5.8)	23 (1.0)	589 (6.9)	4 (0.3)	579 (9.2)	12 (0.6)	588 (7.0)
States										
Connecticut	41 (2.8)	540 (10.8)	42 (2.1)	498 (7.3)	4 (0.7)	458 (12.7)	0 (0.2)	~ ~	13 (0.9)	492 (10.5)
Idaho	31 (2.1)	517 (7.3)	46 (1.9)	500 (6.0)	6 (1.0)	446 (11.2)	1 (0.2)	~ ~	16 (0.7)	469 (11.6)
Illinois	34 (2.8)	542 (8.1)	47 (2.1)	502 (6.2)	5 (0.8)	461 (8.3)	0 (0.2)	~ ~	14 (1.1)	476 (7.3)
Indiana	36 (2.8)	543 (8.6)	48 (2.9)	505 (6.2)	5 (0.8)	474 (9.9)	0 (0.1)	~ ~	11 (1.1)	487 (11.1)
Maryland	39 (2.0)	523 (7.2)	43 (1.8)	484 (5.9)	4 (0.5)	444 (6.9)	0 (0.1)	~ ~	14 (0.8)	465 (8.3)
Massachusetts	38 (2.2)	541 (6.4)	43 (1.3)	503 (6.6)	4 (0.7)	472 (10.6)	1 (0.2)	~ ~	14 (1.0)	486 (7.7)
Michigan	40 (3.2)	543 (8.1)	47 (2.7)	510 (6.1)	2 (0.4)	~ ~	0 (0.0)	~ ~	11 (0.9)	479 (8.7)
Missouri	29 (1.7)	513 (8.1)	50 (1.9)	486 (5.8)	6 (1.1)	468 (9.5)	0 (0.1)	~ ~	14 (0.9)	468 (7.3)
North Carolina	25 (3.1)	525 (15.6)	59 (4.1)	492 (2.8)	5 (0.3)	445 (23.4)	0 (0.1)	~ ~	10 (0.9)	466 (5.2)
Oregon	39 (2.5)	544 (5.2)	46 (2.3)	506 (6.4)	5 (0.6)	447 (12.9)	1 (0.2)	~ ~	9 (0.7)	478 (9.3)
Pennsylvania	34 (2.4)	531 (11.2)	49 (2.0)	501 (5.1)	3 (0.5)	460 (12.8)	0 (0.2)	~ ~	14 (1.1)	487 (7.4)
South Carolina	30 (2.1)	535 (8.8)	52 (1.9)	493 (7.0)	6 (0.7)	467 (8.6)	0 (0.0)	~ ~	12 (1.1)	481 (8.1)
Texas	37 (2.3)	558 (4.5)	38 (0.9)	510 (18.6)	9 (1.4)	476 (15.2)	1 (0.4)	~ ~	15 (1.4)	481 (16.6)
Districts and Consortia										
Academy School Dist. #20, CO	59 (1.7)	543 (2.7)	28 (1.3)	511 (4.7)	1 (0.2)	~ ~	0 (0.1)	~ ~	12 (1.0)	508 (6.5)
Chicago Public Schools, IL	24 (3.3)	470 (12.1)	47 (2.3)	470 (5.4)	11 (1.6)	454 (8.4)	2 (0.6)	~ ~	17 (1.4)	438 (7.2)
Delaware Science Coalition, DE	35 (2.6)	513 (13.4)	48 (2.0)	472 (8.7)	4 (0.7)	435 (13.1)	1 (0.4)	~ ~	12 (1.1)	438 (13.5)
First in the World Consort., IL	58 (4.0)	577 (8.6)	28 (2.4)	548 (11.3)	3 (0.7)	518 (15.4)	1 (0.4)	~ ~	11 (1.4)	513 (11.2)
Fremont/Lincoln/WestSide PS, NE	39 (2.1)	509 (10.9)	40 (2.5)	488 (9.5)	4 (0.8)	429 (11.4)	0 (0.1)	~ ~	17 (2.2)	456 (13.9)
Guilford County, NC	39 (3.4)	543 (14.3)	49 (2.9)	498 (9.4)	4 (0.7)	467 (13.5)	0 (0.2)	~ ~	9 (1.0)	497 (14.7)
Jersey City Public Schools, NJ	23 (2.0)	487 (13.1)	48 (2.0)	481 (8.1)	9 (0.9)	461 (10.6)	1 (0.4)	~ ~	19 (1.3)	468 (9.5)
Miami-Dade County PS, FL	28 (2.5)	446 (13.5)	42 (1.7)	430 (8.4)	8 (0.7)	389 (11.5)	1 (0.2)	~ ~	21 (1.4)	393 (8.8)
Michigan Invitational Group, MI	41 (2.7)	549 (9.3)	47 (2.0)	528 (7.5)	1 (0.3)	~ ~	0 (0.2)	~ ~	11 (1.3)	500 (10.3)
Montgomery County, MD	54 (2.6)	566 (5.5)	27 (1.9)	510 (6.2)	4 (0.9)	463 (11.1)	1 (0.2)	~ ~	14 (1.2)	513 (8.1)
Naperville Sch. Dist. #203, IL	71 (1.6)	580 (5.6)	19 (1.3)	550 (4.0)	1 (0.2)	~ ~	0 (0.2)	~ ~	9 (0.9)	533 (8.6)
Project SMART Consortium, OH	36 (2.5)	541 (10.7)	46 (2.1)	520 (7.7)	3 (0.7)	471 (14.4)	0 (0.2)	~ ~	14 (1.4)	485 (9.0)
Rochester City Sch. Dist., NY	22 (1.7)	458 (13.2)	48 (2.1)	449 (9.6)	8 (0.9)	435 (10.2)	1 (0.2)	~ ~	21 (2.0)	436 (9.0)
SW Math/Sci. Collaborative, PA	37 (2.8)	545 (10.4)	48 (2.3)	507 (7.2)	3 (0.5)	464 (10.9)	0 (0.0)	~ ~	13 (0.9)	485 (9.8)
International Avg. (All Countries)	20 (0.2)	525 (1.4)	41 (0.2)	492 (0.8)	21 (0.2)	460 (1.1)	6 (0.1)	418 (3.0)	12 (0.1)	463 (1.3)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students

* Response categories were defined by each country to conform to their own educational system and may not be strictly comparable across countries. See Reference Exhibit R1.4 for country modifications to the definitions of educational levels.

¹ In most countries, defined as completion of at least a 4-year degree program at a university or an equivalent institute of higher education.

² Finished upper secondary school with or without some tertiary education not equivalent to a university degree. In most countries, finished secondary corresponds to completion of an upper-secondary track terminating after 11 to 13 years of schooling (ISCED level 3 vocational, apprenticeship or academic tracks).

³ Finished primary school or attended some secondary school not equivalent to completion of upper secondary.

⁴ Some primary school or did not go to school.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

A dash (-) indicates data are not available. A tilde (~) indicates insufficient data to report achievement.

Internationally Defined Level	Finished University	Finished Upper Secondary School But Not University	
		Post-Secondary Level	Upper-Secondary Level ¹
	Finished University	Some Vocational-Technical Education After Secondary School or Some University	Finished Secondary School
United States (P) †	Completed Bachelor's Degree at College or University	Some Vocational-Technical Education After Secondary School or Some Community College, College or University Courses	Finish High School
United States (S) ‡	Finish community college, college or university	Some Vocational-Technical Education After Secondary School or Some Community College, College or University Courses	Finish High School
Australia §			
Belgium (Flemish) §		Post-Secondary Tertiary Higher Education Outside University or Some Years of University	Finish Higher Secondary School
Canada	Finish University or College	Some Vocational-Technical Education After Secondary School or Some University or College	
Chile			
Cyprus §	University Degree		Finish Upper Secondary
Czech Republic (P) §†	Finish University (4-5 years university study)	Some Vocational-Technical Education After Secondary School or Some University	Vocational Training or Secondary With Maturita
Czech Republic (S)	Finish University (4-5 years university study)	Medium-cycle higher education or bachelor studies (3 years university study or special higher education)	Vocational Training or Secondary With Maturita
Finland			Finish secondary school (about 12 years)
Hungary §	University or College Degree	Not Included	Apprenticeship (3-year trade school) or Final Exam in Secondary School (4-year academic/vocational)
Indonesia	Completed University Degree (Sarjana 1/2/3)	Academy (3 years or less of higher education outside university - Diploma D1/D2/D3) or Some University (Did Not Complete Degree)	Finish Secondary (SMP, SMA, SMEA, STM, etc.)
Italy §	Finish University (Laurea o Dottorato di Ricerca 4-6 Year)	Vocational/Professional Course After Secondary Diploma or Some University (2-3 Year Short-Course Diploma)	Finish Secondary School With Maturita (Classical/Technical) or Vocational Training Diploma
Japan (S) ‡	University or Graduate School	Vocational/Technical Education After Secondary or 2-year college	Upper secondary
Korea, Rep. of §			
Latvia (LSS) §	Higher Education (5 years)	Vocational School (Post-Secondary) or Technikum (3 years) or Some Higher Education	Finish Secondary or Vocational School (11 years)
Lithuania §	University or Other Higher Education	Vocational or Agricultural School or College (Technical, Art, Music)	
Netherlands	University With Diploma	Vocational/Technical Education After Secondary (bv.heao, hts, pedagogical academy) or Some Years At University (Without Diploma)	Finish Secondary School With Diploma
New Zealand (P) †	University or Teachers' College (College of Education)	Vocational/Polytechnic Education After Secondary School or Some University	Complete Form 6 or Form 7
New Zealand (S) §	University, College of Education (teacher training) or degree or national diploma course at polytech	Certificate course at polytech (e.g., trade certificate) or some university	Finish secondary school (complete Form 6 or Form 7)
Philippines §	Finish College/University	Some Vocational/Technical Education After High School or Some College/University	Finish High School
Romania §	Finish University (facultate)	Post-Secondary Technical School or Did Not Complete University	Finish Senior Secondary (liceu)
Singapore §		Finish JC/Pre-U or Polytechnic or Some Other Vocational/Technical Education After Secondary (e.g., ITE, VITB) ⁴ [includes GCE 'A' level, which is 2 years additional schooling beyond completion of secondary.]	Finish Secondary School
Slovenia (S) §†			Finish gymnasium or secondary school
South Africa §		Finish Technikon or Some University	Finish Secondary
Thailand §	Graduate level (Finish Tertiary Education, 4 years)	Diploma/Undergraduate Level (higher certificate, 2 years)	Finish Academic or Vocational/Technical Upper-Secondary Track
Tunisia	Bachelor's Degree (BA)		

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

■ National educational level is the same as the internationally-defined level

* Educational levels were translated and defined in most countries to be comparable to the internationally-defined levels. Countries that used modified response options to conform to their national education systems are indicated to aid in the interpretation of the reporting categories in Exhibits 4.5 and R1.3. National modifications pertain to both the parents' education and student's expectations questions unless otherwise indicated.

¹ Upper-secondary corresponds to ISCED level 3 tracks terminating after 11 to 13 years in most countries. (Education at a Glance, OECD, 1995.)

² Primary school or lower educational levels were included only in the parents' education question.

³ Japan administered the question pertaining to students' expectations but not the question pertaining to parents' education.

[§] Some educational levels modified from 1995.

[†] Educational levels differ for the parent's education (P) question and the students' expectations (S) question.

Finished Primary School But Not Upper Secondary School		Did Not Finish Primary School ²	Internationally Defined Level
Lower-Secondary Level	Primary Level ²		
Finished Some Secondary School	Finished Primary School	Some Primary School or Did Not Go to School	
Some High School	Finish Elementary School	Finish elementary school or did not go to school	United States (P)
Some High School			United States (S)
		Less Than Year 6 in Primary School	Australia
Finish Lower Secondary School	Finish Basic School	Some Years of Basic School or Did Not Go to School	Belgium (Flemish)
			Canada
	Finish Primary School (grade 8)		Chile
Finish Lower Secondary (Gymnasium - grade 9)			Cyprus
Vocational Training or Secondary School Without Maturita		Not Included	Czech Republic (P)
Vocational Training or Secondary School Without Maturita			Czech Republic (S)
Some Secondary School (10 - 11 years)	Finish Primary School (about 9 years)	Did Not Go to School, Primary School or Part of Lower Secondary (< 9 years)	Finland
Finish General School (grade 8)	Some General School	Not Included	Hungary
	Finish Primary School (SD)		Indonesia
Finish Middle School			Italy
Lower Secondary			Japan (S)
Some High School	Finish Middle School	Some middle school or did not go to school	Korea, Rep. of
			Latvia (LSS)
	Finish Basic School (grade 10)	Some Basic School or Did Not Go to School	Lithuania
Some Years of Secondary School (mavo, havo, vwo) without Diploma	Finish Primary School (grade 8)		Netherlands
			New Zealand (P)
			New Zealand (S)
Some High School	Finish Elementary School	Some Elementary School or Did Not Go to School	Philippines
Did Not Complete Senior Secondary	Finish Junior Secondary (Gymnasium - grade 8)	Did Not Finish Grade 8 or Did Not Go to School	Romania
			Singapore
			Slovenia (S)
			South Africa
Finish Lower Secondary School	Finish Upper Primary School	Finish Lower Primary School or Did Not Go to School	Thailand
			Tunisia

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

■ National educational level is the same as the internationally-defined level

	Percentage of Students Agreeing That It Is Important to Do Each Activity				
	Do Well in Mathematics	Do Well in Science	Do Well in Language	Have Time to Have Fun	Be Good at Sports
Countries					
United States	97 (0.3)	96 (0.3)	96 (0.3)	99 (0.2)	84 (0.6)
Belgium (Flemish)	98 (0.3)	91 (0.8)	96 (0.4)	98 (0.4)	77 (0.9)
Canada	98 (0.2)	95 (0.4)	97 (0.5)	99 (0.2)	82 (0.6)
Chinese Taipei	89 (0.5)	89 (0.5)	89 (0.5)	99 (0.1)	94 (0.3)
Czech Republic	98 (0.3)	93 (0.6)	97 (0.4)	97 (0.4)	82 (1.0)
England	99 (0.2)	97 (0.3)	99 (0.2)	98 (0.3)	79 (0.9)
Hong Kong, SAR	95 (0.4)	86 (0.7)	96 (0.4)	97 (0.3)	84 (0.6)
Italy	97 (0.4)	94 (0.5)	97 (0.3)	98 (0.3)	89 (0.6)
Japan	88 (0.5)	83 (0.7)	89 (0.6)	99 (0.2)	82 (0.6)
Korea, Rep. of	90 (0.4)	87 (0.5)	89 (0.4)	92 (0.3)	88 (0.5)
Netherlands	98 (0.3)	94 (0.9)	99 (0.3)	98 (0.3)	76 (1.5)
Russian Federation	97 (0.4)	96 (0.3)	97 (0.4)	98 (0.3)	90 (0.6)
Singapore	99 (0.2)	98 (0.2)	100 (0.1)	93 (0.6)	90 (0.5)
States					
Connecticut	97 (0.5)	96 (0.6)	97 (0.4)	99 (0.3)	82 (1.0)
Idaho	96 (0.4)	94 (0.5)	95 (0.6)	99 (0.2)	86 (0.8)
Illinois	98 (0.3)	96 (0.5)	97 (0.4)	99 (0.2)	83 (1.0)
Indiana	97 (0.4)	96 (0.5)	96 (0.6)	99 (0.2)	82 (0.8)
Maryland	97 (0.4)	95 (0.5)	96 (0.4)	98 (0.3)	84 (0.8)
Massachusetts	97 (0.4)	96 (0.5)	96 (0.5)	99 (0.2)	82 (0.9)
Michigan	97 (0.4)	96 (0.4)	96 (0.5)	99 (0.2)	84 (1.2)
Missouri	97 (0.5)	95 (0.6)	95 (0.5)	98 (0.4)	85 (1.0)
North Carolina	99 (0.2)	97 (0.4)	99 (0.3)	99 (0.2)	87 (0.6)
Oregon	97 (0.5)	95 (0.7)	95 (0.6)	98 (0.3)	84 (1.2)
<i>Pennsylvania</i>	96 (1.0)	94 (0.7)	95 (0.9)	99 (0.3)	83 (0.9)
South Carolina	98 (0.4)	97 (0.4)	97 (0.3)	98 (0.3)	84 (0.8)
<i>Texas</i>	97 (0.4)	95 (0.6)	95 (0.5)	98 (0.7)	85 (1.1)
Districts and Consortia					
Academy School Dist. #20, CO	97 (0.4)	95 (0.6)	95 (0.6)	99 (0.3)	85 (1.0)
Chicago Public Schools, IL	99 (0.4)	95 (0.7)	97 (0.9)	95 (1.1)	83 (1.3)
Delaware Science Coalition, DE	97 (0.4)	94 (0.8)	96 (0.4)	98 (0.4)	85 (1.1)
First in the World Consort., IL	97 (0.8)	96 (0.8)	97 (0.7)	100 (0.2)	81 (1.2)
Fremont/Lincoln/WestSide PS, NE	95 (0.4)	93 (0.4)	94 (0.5)	99 (0.3)	82 (1.2)
Guilford County, NC	99 (0.4)	98 (0.3)	99 (0.4)	99 (0.4)	84 (1.5)
Jersey City Public Schools, NJ	99 (0.3)	98 (0.3)	99 (0.4)	96 (0.8)	84 (1.2)
Miami-Dade County PS, FL	97 (0.7)	97 (0.8)	98 (0.6)	97 (0.6)	85 (1.2)
Michigan Invitational Group, MI	97 (0.6)	95 (0.7)	97 (0.5)	100 (0.2)	82 (1.5)
Montgomery County, MD	97 (0.8)	94 (0.8)	96 (0.8)	99 (0.3)	83 (1.1)
Naperville Sch. Dist. #203, IL	97 (0.3)	96 (0.4)	96 (0.4)	99 (0.3)	84 (0.9)
Project SMART Consortium, OH	98 (0.5)	96 (0.6)	97 (0.4)	99 (0.3)	85 (0.8)
Rochester City Sch. Dist., NY	99 (0.5)	98 (0.7)	98 (0.5)	98 (0.4)	85 (1.7)
SW Math/Sci. Collaborative, PA	98 (0.5)	96 (0.7)	95 (0.6)	99 (0.3)	83 (1.3)
International Avg. (All Countries)	96 (0.1)	92 (0.1)	96 (0.1)	92 (0.1)	87 (0.1)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

	Percentage of Students Agreeing That Their Mothers Think It Is Important to Do Each Activity				
	Do Well in Mathematics	Do Well in Science	Do Well in Language	Have Time to Have Fun	Be Good at Sports
Countries					
United States	98 (0.2)	98 (0.2)	98 (0.2)	93 (0.4)	76 (0.6)
Belgium (Flemish)	97 (0.4)	92 (0.6)	97 (0.5)	96 (0.5)	66 (1.6)
Canada	99 (0.1)	98 (0.3)	99 (0.2)	96 (0.4)	76 (0.8)
Chinese Taipei	95 (0.5)	95 (0.4)	93 (0.4)	95 (0.3)	91 (0.4)
Czech Republic	99 (0.2)	96 (0.5)	99 (0.3)	90 (0.7)	72 (1.1)
England	99 (0.2)	98 (0.3)	99 (0.2)	94 (0.5)	74 (1.0)
Hong Kong, SAR	96 (0.3)	87 (0.7)	97 (0.3)	82 (0.7)	73 (0.9)
Italy	99 (0.3)	97 (0.3)	99 (0.2)	95 (0.4)	84 (0.8)
Japan	92 (0.5)	87 (0.6)	92 (0.5)	94 (0.4)	82 (0.6)
Korea, Rep. of	95 (0.3)	90 (0.4)	92 (0.4)	66 (0.7)	78 (0.6)
Netherlands	98 (0.3)	94 (0.8)	98 (0.3)	97 (0.5)	59 (1.9)
Russian Federation	96 (0.4)	96 (0.4)	97 (0.4)	92 (0.4)	86 (0.7)
Singapore	99 (0.2)	98 (0.2)	98 (0.2)	76 (0.9)	80 (0.7)
States					
Connecticut	98 (0.3)	98 (0.4)	98 (0.3)	93 (0.7)	75 (1.2)
Idaho	98 (0.4)	97 (0.5)	97 (0.4)	94 (0.5)	82 (1.2)
Illinois	99 (0.2)	97 (0.4)	98 (0.3)	92 (0.9)	74 (1.2)
Indiana	99 (0.4)	98 (0.5)	98 (0.4)	95 (0.5)	74 (0.8)
Maryland	98 (0.3)	97 (0.3)	98 (0.3)	93 (0.4)	76 (1.1)
Massachusetts	98 (0.3)	98 (0.3)	98 (0.3)	93 (0.6)	73 (0.9)
Michigan	98 (0.3)	98 (0.4)	98 (0.3)	94 (0.4)	76 (1.5)
Missouri	98 (0.4)	98 (0.4)	98 (0.4)	93 (0.6)	78 (1.1)
North Carolina	99 (0.3)	98 (0.2)	99 (0.3)	94 (0.6)	80 (0.9)
Oregon	98 (0.4)	97 (0.5)	97 (0.5)	93 (0.6)	78 (1.4)
<i>Pennsylvania</i>	98 (0.6)	98 (0.9)	98 (0.7)	94 (0.5)	77 (1.3)
South Carolina	98 (0.4)	98 (0.4)	98 (0.3)	93 (0.8)	76 (1.3)
<i>Texas</i>	97 (0.4)	97 (0.5)	97 (0.5)	91 (1.1)	80 (1.3)
Districts and Consortia					
Academy School Dist. #20, CO	98 (0.3)	98 (0.4)	97 (0.4)	94 (0.7)	77 (1.1)
Chicago Public Schools, IL	98 (0.5)	96 (0.9)	97 (0.8)	85 (1.2)	72 (1.8)
Delaware Science Coalition, DE	97 (0.6)	96 (0.9)	97 (0.5)	90 (0.7)	77 (1.1)
First in the World Consort., IL	99 (0.4)	98 (0.4)	98 (0.5)	94 (0.6)	66 (2.3)
Fremont/Lincoln/WestSide PS, NE	97 (0.5)	97 (1.0)	97 (1.0)	95 (1.2)	71 (1.8)
Guilford County, NC	99 (0.3)	99 (0.3)	99 (0.3)	94 (0.6)	77 (1.4)
Jersey City Public Schools, NJ	99 (0.3)	98 (0.4)	98 (0.3)	88 (1.3)	78 (1.2)
Miami-Dade County PS, FL	97 (0.6)	98 (0.4)	98 (0.5)	88 (1.3)	79 (1.9)
Michigan Invitational Group, MI	99 (0.4)	98 (0.4)	98 (0.4)	94 (0.8)	75 (1.4)
Montgomery County, MD	98 (0.6)	97 (0.8)	98 (0.6)	92 (0.8)	74 (1.1)
Naperville Sch. Dist. #203, IL	99 (0.2)	99 (0.3)	99 (0.3)	95 (0.6)	75 (1.5)
Project SMART Consortium, OH	97 (0.5)	98 (0.5)	98 (0.4)	94 (0.8)	77 (1.8)
Rochester City Sch. Dist., NY	97 (0.7)	96 (0.7)	97 (0.8)	91 (1.0)	79 (1.9)
SW Math/Sci. Collaborative, PA	98 (0.3)	98 (0.4)	98 (0.3)	93 (0.7)	77 (1.5)
International Avg. (All Countries)	96 (0.1)	93 (0.1)	96 (0.1)	85 (0.1)	81 (0.1)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

	Percentage of Students Agreeing That Their Friends Think It Is Important To Do Each Activity				
	Do Well in Mathematics	Do Well in Science	Do Well in Language	Have Time to Have Fun	Be Good at Sports
Countries					
United States	79 (0.8)	72 (0.8)	76 (1.0)	98 (0.2)	86 (0.5)
Belgium (Flemish)	81 (1.1)	66 (1.2)	77 (1.4)	98 (0.5)	76 (1.1)
Canada	84 (0.6)	72 (0.9)	82 (0.7)	99 (0.1)	84 (0.9)
Chinese Taipei	84 (0.7)	82 (0.7)	84 (0.6)	98 (0.2)	94 (0.4)
Czech Republic	84 (0.9)	68 (1.0)	83 (0.8)	97 (0.4)	83 (0.9)
England	90 (0.8)	84 (1.0)	90 (0.7)	99 (0.2)	80 (1.0)
Hong Kong, SAR	84 (0.7)	66 (1.0)	87 (0.8)	96 (0.3)	83 (0.8)
Italy	80 (0.9)	66 (1.3)	84 (0.7)	98 (0.3)	94 (0.5)
Japan	85 (0.6)	78 (0.8)	85 (0.8)	99 (0.2)	80 (0.7)
Korea, Rep. of	77 (0.7)	72 (0.8)	73 (0.8)	93 (0.3)	80 (0.8)
Netherlands	88 (1.0)	79 (1.2)	90 (0.9)	98 (0.4)	70 (1.9)
Russian Federation	89 (0.6)	83 (0.7)	89 (0.6)	97 (0.4)	87 (0.8)
Singapore	96 (0.3)	94 (0.6)	97 (0.3)	93 (0.6)	88 (0.6)
States					
Connecticut	78 (1.5)	71 (2.1)	76 (1.7)	98 (0.4)	84 (1.1)
Idaho	77 (1.8)	71 (2.2)	74 (1.5)	98 (0.4)	87 (1.1)
Illinois	80 (1.7)	70 (2.1)	75 (2.0)	98 (0.3)	86 (1.1)
Indiana	79 (1.3)	73 (1.5)	76 (1.3)	99 (0.3)	86 (0.9)
Maryland	76 (1.1)	69 (1.3)	75 (1.2)	98 (0.3)	85 (0.9)
Massachusetts	74 (1.5)	69 (1.8)	72 (1.4)	99 (0.2)	85 (0.9)
Michigan	79 (1.0)	75 (1.3)	75 (1.4)	98 (0.3)	87 (1.0)
Missouri	76 (1.3)	71 (1.4)	73 (1.3)	98 (0.4)	85 (1.2)
North Carolina	85 (1.3)	78 (1.5)	84 (1.3)	99 (0.2)	89 (1.0)
Oregon	76 (1.6)	70 (1.9)	74 (1.7)	98 (0.3)	87 (1.1)
<i>Pennsylvania</i>	77 (1.2)	70 (1.2)	74 (1.2)	99 (0.3)	87 (0.8)
South Carolina	83 (1.0)	74 (1.3)	82 (0.8)	98 (0.4)	87 (0.8)
<i>Texas</i>	77 (1.3)	70 (1.7)	74 (1.5)	98 (0.6)	87 (1.0)
Districts and Consortia					
Academy School Dist. #20, CO	77 (1.1)	74 (1.2)	75 (1.2)	99 (0.3)	86 (0.9)
Chicago Public Schools, IL	88 (1.3)	65 (2.4)	78 (2.2)	96 (0.9)	85 (1.2)
Delaware Science Coalition, DE	73 (1.6)	67 (1.8)	74 (1.3)	98 (0.6)	87 (1.1)
First in the World Consort., IL	77 (1.8)	71 (1.4)	74 (1.7)	99 (0.5)	82 (1.3)
Fremont/Lincoln/WestSide PS, NE	75 (1.4)	69 (1.1)	70 (1.1)	97 (1.1)	83 (1.6)
Guilford County, NC	88 (1.3)	82 (1.5)	87 (1.3)	99 (0.3)	87 (1.2)
Jersey City Public Schools, NJ	89 (1.3)	76 (1.6)	88 (1.2)	97 (0.7)	88 (1.0)
Miami-Dade County PS, FL	80 (1.4)	73 (1.4)	80 (1.0)	97 (0.5)	84 (1.1)
Michigan Invitational Group, MI	76 (1.6)	72 (1.8)	73 (1.4)	98 (0.8)	83 (1.8)
Montgomery County, MD	78 (1.6)	69 (1.8)	75 (1.6)	99 (0.4)	85 (1.1)
Naperville Sch. Dist. #203, IL	84 (1.1)	79 (1.2)	82 (1.1)	99 (0.3)	83 (1.0)
Project SMART Consortium, OH	76 (1.2)	73 (1.3)	74 (1.5)	99 (0.3)	85 (1.1)
Rochester City Sch. Dist., NY	82 (1.5)	79 (1.5)	79 (1.6)	97 (0.8)	85 (1.6)
SW Math/Sci. Collaborative, PA	79 (1.2)	72 (1.4)	75 (1.0)	99 (0.2)	86 (1.6)
International Avg. (All Countries)	86 (0.1)	77 (0.2)	86 (0.1)	92 (0.1)	85 (0.1)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.



	Percentage of Students Reporting								
	To Get Desired Job			To Please Parents			To Get Into Desired Secondary School or University		
	Strongly Agree	Agree	Disagree/Strongly Disagree	Strongly Agree	Agree	Disagree/Strongly Disagree	Strongly Agree	Agree	Disagree/Strongly Disagree
Countries									
United States	41 (0.8)	40 (0.7)	18 (0.6)	34 (0.8)	47 (0.7)	19 (0.6)	58 (1.2)	36 (1.0)	6 (0.3)
Belgium (Flemish)	18 (1.2)	40 (1.4)	42 (1.1)	15 (0.6)	52 (1.2)	33 (1.1)	24 (0.8)	46 (1.3)	30 (1.2)
Canada	43 (1.1)	40 (0.9)	17 (0.6)	25 (0.5)	46 (0.6)	30 (0.6)	57 (0.8)	36 (0.6)	7 (0.5)
Chinese Taipei	27 (0.7)	50 (0.8)	23 (0.9)	29 (0.8)	50 (0.6)	20 (0.7)	42 (0.9)	46 (0.7)	11 (0.5)
Czech Republic	32 (1.2)	48 (1.2)	20 (1.0)	22 (1.1)	56 (1.0)	22 (1.0)	46 (1.3)	39 (1.0)	15 (0.9)
England	36 (1.2)	41 (1.0)	23 (1.0)	21 (1.0)	41 (0.9)	38 (1.0)	43 (1.3)	42 (1.1)	15 (0.9)
Hong Kong, SAR	28 (0.8)	53 (0.8)	19 (0.6)	26 (0.7)	55 (0.7)	19 (0.7)	29 (0.8)	49 (0.8)	22 (0.8)
Italy	30 (0.7)	45 (1.0)	24 (0.8)	27 (1.0)	51 (1.0)	22 (0.9)	33 (0.7)	46 (1.0)	20 (0.9)
Japan	12 (0.5)	39 (0.7)	49 (1.0)	6 (0.4)	25 (0.7)	69 (0.8)	34 (0.8)	54 (0.7)	11 (0.7)
Korea, Rep. of	10 (0.5)	34 (0.6)	56 (0.7)	12 (0.5)	50 (0.7)	38 (0.7)	31 (0.7)	54 (0.7)	15 (0.5)
Netherlands	18 (1.2)	37 (0.9)	45 (1.3)	7 (0.8)	36 (1.2)	57 (1.3)	20 (1.2)	45 (1.1)	35 (1.6)
Russian Federation	42 (1.1)	42 (1.0)	16 (0.8)	20 (0.7)	40 (1.0)	39 (1.3)	40 (1.0)	48 (1.0)	12 (0.6)
Singapore	40 (1.0)	46 (0.8)	13 (0.6)	26 (0.8)	46 (0.6)	28 (0.8)	54 (1.1)	41 (1.0)	5 (0.4)
States									
Connecticut	36 (1.4)	43 (1.1)	21 (1.3)	32 (1.5)	47 (1.4)	20 (0.9)	54 (1.8)	41 (1.9)	6 (0.6)
Idaho	42 (1.4)	42 (1.2)	16 (0.9)	36 (1.0)	48 (1.1)	17 (0.8)	57 (1.5)	37 (1.3)	6 (0.8)
Illinois	40 (1.1)	42 (0.9)	18 (0.6)	29 (1.2)	49 (1.4)	22 (0.9)	58 (1.3)	37 (1.2)	5 (0.8)
Indiana	45 (2.2)	41 (2.3)	15 (0.8)	34 (1.6)	49 (1.4)	17 (0.9)	59 (2.3)	36 (2.0)	5 (0.5)
Maryland	43 (0.9)	40 (0.8)	16 (0.7)	36 (1.1)	46 (1.0)	18 (1.0)	59 (1.2)	35 (1.1)	6 (0.6)
Massachusetts	33 (1.1)	42 (1.2)	25 (1.4)	31 (0.8)	47 (1.1)	22 (1.1)	50 (1.2)	43 (1.1)	7 (0.5)
Michigan	38 (1.1)	44 (1.0)	18 (1.1)	30 (1.1)	49 (1.1)	20 (1.2)	55 (1.4)	40 (1.3)	5 (0.5)
Missouri	39 (1.5)	44 (1.3)	17 (1.2)	37 (1.1)	45 (1.3)	19 (1.1)	53 (1.2)	38 (1.2)	9 (0.6)
North Carolina	49 (1.2)	37 (1.2)	14 (0.8)	42 (1.5)	43 (1.1)	15 (1.1)	67 (1.5)	29 (1.4)	4 (0.3)
Oregon	39 (1.7)	43 (1.5)	18 (0.9)	32 (1.4)	52 (2.0)	17 (1.1)	52 (1.6)	41 (1.7)	7 (0.8)
<i>Pennsylvania</i>	36 (2.1)	44 (1.1)	20 (1.3)	30 (1.3)	49 (1.2)	21 (1.2)	52 (1.9)	40 (1.1)	8 (1.1)
South Carolina	46 (1.4)	40 (1.2)	14 (0.7)	39 (0.8)	44 (1.1)	18 (0.9)	66 (1.2)	30 (1.2)	3 (0.5)
<i>Texas</i>	43 (1.2)	41 (1.2)	16 (1.1)	36 (1.5)	46 (0.9)	18 (1.6)	60 (1.2)	34 (1.1)	6 (0.7)
Districts and Consortia									
Academy School Dist. #20, CO	42 (1.3)	41 (1.4)	17 (1.1)	37 (1.1)	47 (1.5)	16 (1.1)	60 (1.6)	36 (1.5)	4 (0.5)
Chicago Public Schools, IL	43 (3.1)	43 (2.2)	14 (1.5)	26 (2.0)	44 (1.9)	30 (2.0)	60 (3.4)	35 (2.9)	4 (0.9)
Delaware Science Coalition, DE	45 (1.0)	40 (1.5)	16 (1.1)	33 (1.3)	47 (1.8)	20 (1.3)	55 (1.2)	40 (1.2)	6 (0.7)
First in the World Consort., IL	35 (1.0)	40 (2.2)	26 (2.0)	28 (2.3)	50 (2.0)	22 (1.2)	55 (1.6)	40 (1.3)	5 (0.9)
Fremont/Lincoln/WestSide PS, NE	43 (2.1)	41 (2.0)	16 (1.4)	35 (1.3)	49 (1.9)	17 (1.6)	54 (1.8)	40 (1.9)	6 (1.1)
Guilford County, NC	44 (2.0)	38 (1.6)	18 (1.6)	39 (1.7)	45 (2.2)	16 (1.4)	66 (2.2)	30 (1.8)	4 (0.7)
Jersey City Public Schools, NJ	48 (1.6)	36 (1.5)	16 (1.1)	35 (1.2)	43 (1.5)	22 (1.0)	64 (1.7)	31 (1.6)	5 (0.6)
Miami-Dade County PS, FL	49 (2.0)	36 (1.4)	15 (1.4)	37 (1.5)	44 (1.4)	19 (1.7)	61 (1.7)	33 (1.0)	6 (1.0)
Michigan Invitational Group, MI	36 (1.5)	45 (1.9)	19 (1.3)	29 (1.6)	50 (1.8)	22 (1.8)	53 (2.2)	41 (1.6)	6 (1.0)
Montgomery County, MD	38 (1.4)	44 (1.5)	19 (1.7)	40 (2.0)	46 (2.0)	14 (1.2)	59 (1.5)	36 (1.5)	5 (0.9)
Naperville Sch. Dist. #203, IL	38 (1.6)	42 (2.0)	20 (1.4)	35 (1.3)	48 (1.5)	17 (1.3)	59 (1.5)	37 (1.6)	4 (0.6)
Project SMART Consortium, OH	38 (1.8)	44 (1.3)	18 (1.2)	30 (1.2)	51 (1.4)	19 (1.1)	52 (1.9)	42 (1.9)	6 (1.0)
Rochester City Sch. Dist., NY	r 51 (2.6)	36 (2.2)	13 (1.2)	r 34 (2.2)	42 (2.1)	24 (1.7)	r 61 (2.2)	33 (2.0)	6 (0.7)
SW Math/Sci. Collaborative, PA	37 (1.5)	42 (1.6)	20 (0.9)	31 (1.1)	51 (1.4)	17 (1.0)	54 (1.6)	39 (1.4)	7 (0.8)
International Avg. (All Countries)	39 (0.2)	42 (0.2)	19 (0.1)	29 (0.1)	42 (0.1)	30 (0.2)	46 (0.2)	41 (0.2)	13 (0.1)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

An "r" indicates a 70-84% student response rate.

	Average Hours Spent Each Day Studying or Doing Homework ¹				Percentage of Students Reporting Spending Some Time Studying All Three Subjects: Mathematics, Science, and Other
	Mathematics	Science	Other School Subjects	Total	
Countries					
United States	0.8 (0.02)	0.6 (0.01)	0.9 (0.02)	2.1 (0.04)	72 (1.6)
Belgium (Flemish)	1.1 (0.03)	0.8 (0.03)	1.4 (0.04)	2.9 (0.05)	86 (1.2)
Canada	0.8 (0.02)	0.6 (0.01)	1.0 (0.02)	2.2 (0.04)	78 (1.0)
Chinese Taipei	0.7 (0.02)	0.6 (0.02)	1.0 (0.02)	2.0 (0.05)	55 (1.3)
Czech Republic	0.7 (0.02)	0.6 (0.02)	0.7 (0.02)	1.9 (0.04)	74 (1.4)
England	--	--	--	--	--
Hong Kong, SAR	0.7 (0.02)	0.5 (0.01)	0.7 (0.02)	1.6 (0.04)	53 (1.3)
Italy	1.3 (0.03)	1.0 (0.02)	1.9 (0.03)	3.6 (0.04)	91 (0.8)
Japan	0.6 (0.01)	0.4 (0.01)	0.8 (0.02)	1.7 (0.04)	59 (1.4)
Korea, Rep. of	0.6 (0.02)	0.4 (0.01)	0.7 (0.02)	1.6 (0.03)	50 (0.9)
Netherlands	0.6 (0.02)	0.6 (0.02)	1.0 (0.02)	2.2 (0.04)	89 (1.1)
Russian Federation	1.1 (0.03)	1.5 (0.03)	1.2 (0.04)	3.1 (0.05)	89 (0.7)
Singapore	1.3 (0.02)	1.2 (0.02)	1.7 (0.03)	3.5 (0.04)	90 (0.8)
States					
Connecticut	0.8 (0.02)	0.7 (0.02)	1.0 (0.02)	2.2 (0.05)	83 (1.8)
Idaho	0.7 (0.02)	0.6 (0.02)	0.8 (0.02)	1.9 (0.04)	65 (2.7)
Illinois	0.8 (0.02)	0.6 (0.02)	1.0 (0.03)	2.2 (0.05)	77 (1.6)
Indiana	0.7 (0.03)	0.5 (0.02)	0.8 (0.03)	1.9 (0.06)	70 (2.2)
Maryland	0.8 (0.02)	0.6 (0.02)	0.9 (0.02)	2.0 (0.04)	76 (1.4)
Massachusetts	0.8 (0.02)	0.7 (0.02)	1.0 (0.03)	2.3 (0.06)	84 (1.4)
Michigan	0.8 (0.03)	0.6 (0.02)	0.9 (0.03)	2.0 (0.05)	75 (1.6)
Missouri	0.7 (0.03)	0.5 (0.02)	0.8 (0.03)	1.9 (0.06)	65 (1.9)
North Carolina	0.8 (0.02)	0.6 (0.02)	0.9 (0.03)	2.1 (0.05)	74 (2.1)
Oregon	0.8 (0.02)	0.5 (0.03)	0.9 (0.03)	2.0 (0.04)	68 (2.2)
Pennsylvania	0.7 (0.03)	0.6 (0.02)	0.8 (0.03)	1.9 (0.07)	72 (1.9)
South Carolina	0.8 (0.02)	0.6 (0.02)	0.9 (0.03)	2.0 (0.05)	73 (1.6)
Texas	0.8 (0.04)	0.5 (0.03)	0.8 (0.03)	1.8 (0.07)	60 (2.3)
Districts and Consortia					
Academy School Dist. #20, CO	1.0 (0.03)	0.8 (0.03)	1.1 (0.03)	2.5 (0.05)	86 (0.8)
Chicago Public Schools, IL	1.2 (0.06)	0.8 (0.03)	1.3 (0.03)	2.7 (0.07)	79 (2.0)
Delaware Science Coalition, DE	0.7 (0.03)	0.6 (0.03)	0.8 (0.03)	1.9 (0.04)	70 (2.2)
First in the World Consort., IL	0.8 (0.02)	0.6 (0.03)	1.1 (0.05)	2.3 (0.07)	84 (1.7)
Fremont/Lincoln/WestSide PS, NE	0.7 (0.05)	0.5 (0.03)	0.9 (0.04)	1.8 (0.09)	65 (1.5)
Guilford County, NC	0.9 (0.03)	0.6 (0.02)	0.9 (0.03)	2.3 (0.05)	82 (1.6)
Jersey City Public Schools, NJ	1.1 (0.05)	0.8 (0.03)	1.3 (0.05)	2.7 (0.09)	76 (2.5)
Miami-Dade County PS, FL	0.9 (0.03)	0.7 (0.04)	0.9 (0.04)	2.2 (0.08)	69 (2.3)
Michigan Invitational Group, MI	0.7 (0.03)	0.6 (0.01)	0.8 (0.03)	2.0 (0.06)	76 (1.5)
Montgomery County, MD	0.9 (0.04)	0.7 (0.03)	1.0 (0.03)	2.4 (0.04)	81 (1.4)
Naperville Sch. Dist. #203, IL	0.8 (0.02)	0.6 (0.02)	1.0 (0.03)	2.3 (0.04)	85 (1.4)
Project SMART Consortium, OH	0.6 (0.02)	0.5 (0.02)	0.8 (0.03)	1.8 (0.04)	71 (1.8)
Rochester City Sch. Dist., NY	0.8 (0.05)	0.7 (0.04)	0.9 (0.05)	2.1 (0.07)	74 (2.4)
SW Math/Sci. Collaborative, PA	0.7 (0.03)	0.5 (0.02)	0.8 (0.02)	1.9 (0.05)	72 (2.1)
International Avg. (All Countries)	1.1 (0.00)	1.0 (0.00)	1.3 (0.01)	2.8 (0.01)	80 (0.2)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

¹ Average hours based on: No time=0; less than 1 hour=.5; 1-2 hours=1.5; 3-5 hours=4; more than 5 hours=7.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

A dash (-) indicates data are not available.

Countries	Average Hours Spent Each Day ¹					
	Watching Television or Videos	Playing Computer Games	Playing or Talking With Friends	Doing Jobs at Home	Playing Sports	Reading a Book for Enjoyment
United States	2.5 (0.06)	0.9 (0.02)	2.4 (0.05)	1.1 (0.03)	1.9 (0.03)	0.6 (0.02)
Belgium (Flemish)	2.1 (0.04)	0.9 (0.04)	1.8 (0.05)	1.0 (0.04)	1.8 (0.07)	0.6 (0.02)
Canada	2.2 (0.03)	0.8 (0.02)	2.1 (0.04)	1.1 (0.03)	1.9 (0.03)	0.7 (0.04)
Chinese Taipei	2.0 (0.04)	0.9 (0.03)	1.3 (0.03)	1.0 (0.02)	1.2 (0.02)	0.9 (0.02)
Czech Republic	2.3 (0.05)	0.9 (0.06)	3.0 (0.07)	1.2 (0.03)	2.0 (0.05)	1.0 (0.04)
England	2.6 (0.05)	1.2 (0.04)	2.5 (0.08)	0.8 (0.02)	1.6 (0.04)	0.6 (0.02)
Hong Kong, SAR	2.4 (0.04)	1.0 (0.03)	1.3 (0.04)	0.6 (0.01)	1.0 (0.03)	0.8 (0.02)
Italy	1.8 (0.03)	1.0 (0.03)	2.7 (0.05)	1.1 (0.03)	1.7 (0.03)	0.7 (0.02)
Japan	3.1 (0.05)	0.9 (0.03)	1.8 (0.04)	0.5 (0.02)	1.1 (0.03)	0.8 (0.02)
Korea, Rep. of	2.9 (0.04)	0.8 (0.03)	1.3 (0.03)	0.6 (0.01)	0.6 (0.02)	0.6 (0.01)
Netherlands	2.4 (0.10)	0.9 (0.04)	2.6 (0.09)	0.8 (0.04)	1.8 (0.06)	0.7 (0.04)
Russian Federation	2.6 (0.05)	0.7 (0.03)	3.0 (0.05)	1.5 (0.03)	1.3 (0.03)	1.2 (0.03)
Singapore	2.4 (0.04)	1.1 (0.03)	1.5 (0.04)	0.9 (0.02)	1.5 (0.04)	1.0 (0.02)
States						
Connecticut	2.4 (0.09)	0.9 (0.04)	2.6 (0.08)	1.0 (0.06)	2.0 (0.05)	0.6 (0.03)
Idaho	2.1 (0.08)	0.8 (0.02)	2.2 (0.07)	1.2 (0.05)	2.0 (0.08)	0.7 (0.03)
Illinois	2.6 (0.09)	0.9 (0.05)	2.5 (0.09)	1.1 (0.05)	1.9 (0.04)	0.7 (0.03)
Indiana	2.4 (0.07)	0.9 (0.04)	2.4 (0.09)	1.1 (0.04)	1.9 (0.07)	0.6 (0.04)
Maryland	3.0 (0.10)	1.1 (0.04)	2.8 (0.07)	1.1 (0.04)	2.0 (0.05)	0.6 (0.02)
Massachusetts	2.3 (0.07)	1.0 (0.03)	2.6 (0.08)	0.9 (0.03)	1.9 (0.04)	0.5 (0.03)
Michigan	2.2 (0.09)	0.8 (0.04)	2.3 (0.08)	1.0 (0.06)	2.0 (0.06)	0.6 (0.03)
Missouri	2.6 (0.08)	0.9 (0.04)	2.7 (0.09)	1.3 (0.05)	1.9 (0.04)	0.5 (0.02)
North Carolina	2.9 (0.09)	0.9 (0.04)	2.5 (0.06)	1.3 (0.03)	1.9 (0.05)	0.6 (0.02)
Oregon	2.0 (0.06)	0.8 (0.04)	2.3 (0.06)	1.1 (0.04)	2.0 (0.05)	0.7 (0.03)
<i>Pennsylvania</i>	2.4 (0.09)	0.9 (0.04)	2.7 (0.09)	1.0 (0.04)	2.0 (0.04)	0.5 (0.03)
South Carolina	2.9 (0.09)	1.0 (0.05)	2.5 (0.06)	1.2 (0.05)	2.0 (0.06)	0.7 (0.03)
Texas	2.6 (0.09)	0.9 (0.05)	2.3 (0.09)	1.2 (0.06)	1.8 (0.06)	0.6 (0.03)
Districts and Consortia						
Academy School Dist. #20, CO	2.1 (0.06)	0.9 (0.05)	2.1 (0.05)	0.9 (0.02)	2.0 (0.05)	0.7 (0.03)
Chicago Public Schools, IL	3.3 (0.13)	1.0 (0.09)	2.7 (0.13)	1.7 (0.10)	2.0 (0.08)	1.2 (0.12)
Delaware Science Coalition, DE	2.8 (0.10)	1.0 (0.06)	2.8 (0.11)	1.1 (0.05)	2.0 (0.06)	0.6 (0.03)
First in the World Consort., IL	1.9 (0.06)	0.7 (0.05)	2.1 (0.09)	0.7 (0.02)	1.7 (0.07)	0.7 (0.04)
Fremont/Lincoln/WestSide PS, NE	2.5 (0.08)	0.9 (0.08)	2.8 (0.09)	1.0 (0.04)	2.0 (0.08)	0.7 (0.05)
Guilford County, NC	2.8 (0.08)	0.9 (0.05)	2.5 (0.08)	1.1 (0.04)	1.9 (0.07)	0.7 (0.04)
Jersey City Public Schools, NJ	3.2 (0.09)	1.0 (0.06)	2.8 (0.10)	1.4 (0.05)	1.9 (0.07)	0.9 (0.05)
Miami-Dade County PS, FL	3.1 (0.12)	1.1 (0.07)	2.5 (0.11)	1.4 (0.06)	2.1 (0.12)	0.9 (0.08)
Michigan Invitational Group, MI	2.0 (0.08)	0.8 (0.05)	2.3 (0.10)	1.0 (0.04)	1.9 (0.08)	0.6 (0.04)
Montgomery County, MD	2.5 (0.08)	0.9 (0.05)	2.3 (0.08)	0.9 (0.04)	1.8 (0.05)	0.7 (0.02)
Naperville Sch. Dist. #203, IL	1.8 (0.05)	0.7 (0.03)	2.0 (0.05)	0.7 (0.03)	2.0 (0.05)	0.8 (0.03)
Project SMART Consortium, OH	2.5 (0.08)	0.9 (0.06)	2.9 (0.10)	1.0 (0.05)	2.2 (0.09)	0.5 (0.03)
Rochester City Sch. Dist., NY	3.6 (0.11)	1.2 (0.08)	2.9 (0.10)	1.5 (0.07)	1.9 (0.07)	0.7 (0.05)
SW Math/Sci. Collaborative, PA	2.4 (0.07)	0.9 (0.04)	2.5 (0.10)	0.9 (0.04)	2.0 (0.06)	0.5 (0.03)
International Avg. (All Countries)	2.3 (0.01)	0.8 (0.01)	1.9 (0.01)	1.4 (0.01)	1.5 (0.01)	1.0 (0.00)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

 States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

* Activities are not necessarily exclusive; students may have reported engaging in more than one activity at the same time.

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

¹ Average hours based on: No time=0; less than 1 hour=.5; 1-2 hours=1.5; 3-5 hours=4; more than 5 hours=7.

	Strongly Disagree		Disagree		Agree		Strongly Agree		Average ¹
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Countries									
United States	26 (0.8)	547 (4.6)	33 (0.6)	517 (4.5)	24 (0.6)	478 (4.4)	18 (0.7)	455 (4.3)	2.3 (0.02)
Belgium (Flemish)	17 (0.8)	598 (5.4)	30 (0.9)	580 (4.8)	31 (1.0)	540 (4.5)	21 (0.9)	526 (3.8)	2.6 (0.02)
Canada	26 (1.2)	577 (3.2)	31 (0.7)	542 (3.0)	26 (1.0)	502 (4.7)	17 (0.8)	485 (3.4)	2.3 (0.03)
Chinese Taipei	16 (0.6)	646 (6.1)	28 (0.7)	623 (4.3)	34 (0.7)	564 (4.5)	23 (0.7)	533 (3.9)	2.6 (0.02)
Czech Republic	12 (0.9)	567 (6.9)	35 (1.2)	541 (5.0)	36 (1.1)	500 (4.7)	16 (0.9)	486 (5.8)	2.6 (0.03)
England	19 (0.9)	539 (6.9)	40 (1.2)	512 (4.5)	28 (1.2)	471 (4.8)	13 (0.8)	458 (6.3)	2.4 (0.02)
Hong Kong, SAR	11 (0.5)	619 (5.5)	31 (0.8)	606 (3.9)	39 (0.7)	573 (4.4)	20 (0.8)	549 (5.0)	2.7 (0.02)
Italy	22 (0.9)	529 (5.6)	32 (0.9)	495 (3.6)	27 (0.8)	456 (4.9)	18 (0.9)	435 (5.0)	2.4 (0.02)
Japan	12 (0.5)	602 (4.9)	29 (0.7)	598 (2.7)	38 (0.6)	576 (2.7)	21 (0.7)	545 (3.3)	2.7 (0.02)
Korea, Rep. of	10 (0.5)	648 (3.9)	33 (0.7)	621 (3.0)	41 (0.8)	564 (2.7)	15 (0.5)	536 (3.6)	2.6 (0.02)
Netherlands	16 (0.8)	570 (7.4)	28 (1.4)	557 (7.9)	36 (1.5)	529 (8.2)	20 (1.0)	515 (9.2)	2.6 (0.03)
Russian Federation	21 (0.9)	580 (5.8)	40 (0.9)	538 (5.6)	30 (1.2)	501 (7.3)	9 (0.6)	471 (10.0)	2.3 (0.03)
Singapore	16 (0.7)	631 (7.3)	37 (0.7)	614 (6.1)	33 (0.8)	593 (6.4)	13 (0.6)	575 (6.9)	2.4 (0.02)
States									
Connecticut	28 (1.4)	547 (10.4)	35 (1.2)	525 (9.8)	23 (1.1)	484 (8.7)	15 (1.2)	468 (8.4)	2.3 (0.04)
Idaho	23 (1.4)	535 (7.8)	33 (1.8)	512 (7.7)	25 (1.2)	468 (7.1)	20 (1.6)	460 (6.8)	2.4 (0.05)
Illinois	27 (1.5)	546 (9.2)	36 (0.9)	521 (7.8)	23 (1.1)	477 (6.8)	13 (0.9)	462 (6.2)	2.2 (0.04)
Indiana	23 (1.9)	558 (8.3)	35 (1.3)	532 (6.3)	25 (1.3)	487 (6.5)	17 (1.7)	468 (6.4)	2.4 (0.06)
Maryland	26 (1.2)	533 (5.5)	32 (0.9)	507 (6.7)	25 (0.9)	475 (7.8)	17 (1.1)	450 (7.8)	2.3 (0.04)
Massachusetts	24 (1.6)	560 (7.2)	34 (1.0)	524 (5.4)	25 (1.1)	487 (7.1)	17 (1.2)	468 (7.1)	2.4 (0.04)
Michigan	28 (1.4)	557 (8.9)	33 (1.2)	529 (7.1)	24 (1.1)	488 (7.0)	15 (0.8)	473 (6.5)	2.3 (0.03)
Missouri	22 (1.1)	527 (7.2)	31 (1.1)	507 (4.9)	27 (1.2)	469 (5.0)	20 (1.5)	455 (7.8)	2.5 (0.04)
North Carolina	27 (1.5)	535 (7.9)	37 (1.1)	504 (7.7)	22 (1.0)	465 (7.1)	14 (0.9)	448 (5.6)	2.2 (0.03)
Oregon	25 (1.5)	555 (6.9)	35 (1.3)	530 (7.3)	25 (1.1)	485 (6.7)	15 (1.6)	471 (6.1)	2.3 (0.05)
Pennsylvania	26 (1.1)	544 (10.2)	34 (1.2)	522 (5.3)	24 (0.9)	480 (6.0)	16 (1.1)	462 (7.2)	2.3 (0.03)
South Carolina	25 (1.1)	542 (8.2)	34 (1.2)	516 (7.6)	23 (0.9)	469 (8.1)	18 (1.2)	462 (7.9)	2.3 (0.04)
Texas	27 (1.6)	564 (8.6)	33 (1.6)	531 (10.3)	25 (1.1)	486 (9.6)	15 (1.0)	480 (9.4)	2.3 (0.03)
Districts and Consortia									
Academy School Dist. #20, CO	28 (1.1)	564 (3.9)	35 (1.2)	537 (3.3)	24 (1.4)	500 (4.1)	13 (1.0)	487 (6.5)	2.2 (0.03)
Chicago Public Schools, IL	27 (1.8)	499 (7.4)	35 (1.6)	470 (7.7)	26 (1.3)	436 (7.7)	12 (1.3)	419 (5.0)	2.2 (0.04)
Delaware Science Coalition, DE	25 (1.5)	529 (10.8)	30 (1.5)	492 (10.0)	27 (1.6)	457 (9.3)	18 (1.8)	442 (9.1)	2.4 (0.04)
First in the World Consort., IL	34 (2.3)	596 (7.1)	36 (2.1)	562 (7.9)	18 (1.1)	532 (7.8)	11 (1.3)	490 (8.7)	2.1 (0.04)
Fremont/Lincoln/WestSide PS, NE	26 (2.2)	535 (13.0)	31 (2.1)	515 (6.5)	26 (1.2)	463 (8.4)	17 (2.4)	412 (7.8)	2.3 (0.06)
Guilford County, NC	28 (1.8)	537 (9.4)	36 (1.6)	521 (9.0)	23 (1.6)	497 (8.0)	13 (1.0)	478 (10.5)	2.2 (0.04)
Jersey City Public Schools, NJ	26 (2.0)	526 (10.0)	33 (1.8)	485 (7.3)	24 (1.8)	450 (10.3)	18 (1.3)	427 (7.6)	2.3 (0.05)
Miami-Dade County PS, FL	20 (1.5)	473 (14.1)	32 (1.8)	436 (10.5)	29 (1.9)	401 (9.5)	20 (2.3)	389 (9.2)	2.5 (0.06)
Michigan Invitational Group, MI	24 (2.0)	579 (6.2)	35 (1.6)	543 (7.8)	25 (1.7)	507 (6.3)	16 (1.3)	480 (13.2)	2.3 (0.04)
Montgomery County, MD	31 (2.2)	571 (6.7)	34 (1.0)	545 (5.7)	22 (1.4)	513 (5.0)	13 (1.1)	488 (8.7)	2.2 (0.05)
Naperville Sch. Dist. #203, IL	35 (1.1)	606 (3.3)	32 (1.3)	568 (3.7)	20 (1.2)	540 (4.8)	13 (0.7)	520 (6.6)	2.1 (0.02)
Project SMART Consortium, OH	28 (2.2)	561 (10.6)	34 (1.9)	535 (6.9)	23 (1.8)	487 (6.4)	15 (1.6)	467 (6.7)	2.2 (0.06)
Rochester City Sch. Dist., NY	29 (1.3)	474 (7.9)	27 (1.8)	467 (7.8)	27 (1.3)	432 (6.8)	17 (1.2)	403 (9.4)	2.3 (0.03)
SW Math/Sci. Collaborative, PA	28 (1.3)	555 (9.5)	35 (1.0)	529 (7.4)	24 (0.9)	485 (8.3)	13 (0.9)	464 (8.0)	2.2 (0.03)
International Avg. (All Countries)	17 (0.1)	532 (1.0)	33 (0.2)	506 (0.8)	33 (0.2)	469 (0.8)	17 (0.1)	450 (0.9)	2.5 (0.00)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

¹ Average scale value based on: Strongly disagree=4; disagree=3; agree=2; strongly agree=1.

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.



	Like a Lot		Like		Dislike		Dislike a Lot		Average ¹
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	
Countries									
United States	23 (0.9)	527 (4.5)	46 (0.6)	505 (4.0)	19 (0.7)	496 (4.5)	12 (0.7)	465 (5.6)	2.8 (0.02)
Belgium (Flemish)	20 (0.9)	598 (5.1)	46 (1.3)	562 (4.2)	24 (1.3)	537 (6.8)	10 (0.7)	518 (5.1)	2.8 (0.02)
Canada	24 (1.0)	561 (3.8)	49 (1.6)	531 (2.6)	18 (0.8)	513 (4.8)	9 (0.5)	486 (4.6)	2.9 (0.02)
Chinese Taipei	15 (0.7)	654 (5.3)	41 (0.8)	617 (3.5)	33 (0.8)	546 (5.2)	12 (0.6)	502 (5.3)	2.6 (0.02)
Czech Republic	11 (0.9)	580 (7.9)	44 (1.5)	530 (4.5)	34 (1.7)	498 (5.6)	11 (0.8)	489 (7.6)	2.5 (0.03)
England	23 (1.1)	514 (6.8)	54 (1.1)	497 (4.3)	16 (0.9)	487 (5.5)	6 (0.5)	470 (8.7)	3.0 (0.02)
Hong Kong, SAR	22 (0.7)	610 (4.7)	53 (0.7)	587 (4.0)	20 (0.8)	558 (4.7)	5 (0.4)	521 (7.3)	2.9 (0.02)
Italy	30 (1.0)	517 (4.6)	38 (1.1)	482 (4.3)	22 (0.8)	446 (5.1)	10 (0.7)	433 (5.8)	2.9 (0.02)
Japan	9 (0.5)	631 (5.7)	39 (0.9)	600 (2.2)	38 (1.0)	563 (2.5)	14 (0.6)	530 (4.1)	2.4 (0.02)
Korea, Rep. of	12 (0.5)	647 (4.2)	42 (0.8)	608 (2.4)	38 (0.7)	557 (2.7)	8 (0.4)	536 (3.8)	2.6 (0.02)
Netherlands	--	--	--	--	--	--	--	--	--
Russian Federation	22 (1.0)	562 (5.5)	56 (0.8)	529 (5.8)	19 (0.9)	498 (8.1)	3 (0.3)	460 (13.3)	3.0 (0.02)
Singapore	30 (1.0)	626 (6.6)	49 (0.8)	602 (6.4)	14 (0.6)	583 (7.3)	6 (0.4)	564 (7.5)	3.0 (0.02)
States									
Connecticut	23 (1.8)	534 (11.6)	48 (1.6)	511 (9.7)	18 (1.2)	507 (8.7)	11 (1.3)	486 (9.2)	2.8 (0.04)
Idaho	19 (1.5)	519 (8.8)	46 (1.1)	502 (6.8)	22 (1.2)	482 (8.9)	12 (1.3)	454 (8.0)	2.7 (0.05)
Illinois	27 (1.4)	534 (8.6)	48 (1.0)	507 (7.1)	17 (1.0)	502 (7.0)	8 (0.8)	463 (8.6)	2.9 (0.03)
Indiana	23 (1.7)	535 (8.7)	47 (1.0)	520 (6.8)	18 (1.2)	503 (10.0)	12 (1.1)	484 (9.6)	2.8 (0.04)
Maryland	25 (1.6)	518 (6.0)	45 (1.5)	497 (6.6)	19 (1.1)	484 (7.4)	11 (1.1)	467 (10.3)	2.8 (0.04)
Massachusetts	20 (1.5)	536 (6.7)	47 (1.3)	517 (6.5)	21 (1.2)	502 (8.4)	12 (0.9)	482 (6.7)	2.8 (0.04)
Michigan	22 (1.4)	540 (10.9)	47 (1.3)	522 (7.7)	20 (0.9)	509 (6.8)	11 (1.0)	474 (7.3)	2.8 (0.03)
Missouri	22 (1.5)	511 (7.8)	45 (1.2)	496 (4.8)	20 (1.2)	473 (6.8)	13 (1.2)	460 (8.8)	2.8 (0.04)
North Carolina	32 (1.6)	512 (8.5)	47 (1.2)	494 (7.9)	14 (0.9)	482 (8.5)	7 (0.6)	458 (8.2)	3.1 (0.03)
Oregon	20 (1.6)	536 (8.0)	49 (1.5)	519 (6.6)	21 (1.1)	503 (7.0)	10 (1.2)	477 (8.1)	2.8 (0.04)
Pennsylvania	24 (1.3)	530 (10.3)	48 (1.5)	510 (6.0)	17 (1.2)	494 (7.2)	10 (1.1)	469 (10.0)	2.9 (0.04)
South Carolina	26 (1.4)	517 (8.7)	47 (1.5)	502 (8.8)	17 (1.1)	500 (8.0)	11 (0.9)	472 (9.2)	2.9 (0.03)
Texas	23 (1.5)	536 (12.9)	50 (1.4)	522 (9.6)	18 (1.2)	512 (10.0)	9 (0.9)	479 (10.4)	2.9 (0.04)
Districts and Consortia									
Academy School Dist. #203, CO	17 (1.1)	547 (6.6)	46 (1.5)	537 (3.4)	24 (1.1)	518 (4.0)	13 (1.1)	499 (6.4)	2.7 (0.03)
Chicago Public Schools, IL	34 (2.7)	484 (7.9)	46 (2.1)	458 (6.5)	14 (1.9)	449 (7.1)	5 (0.9)	415 (8.3)	3.1 (0.05)
Delaware Science Coalition, DE	23 (1.4)	503 (10.9)	47 (1.7)	485 (9.3)	18 (1.5)	457 (10.0)	12 (1.3)	467 (10.9)	2.8 (0.03)
First in the World Consort., IL	20 (1.5)	586 (5.8)	48 (2.3)	563 (6.2)	20 (1.9)	545 (8.9)	11 (1.8)	521 (13.8)	2.8 (0.04)
Fremont/Lincoln/WestSide PS, NE	23 (1.3)	511 (14.9)	47 (1.3)	496 (8.8)	20 (1.3)	480 (11.7)	10 (0.8)	413 (10.4)	2.8 (0.03)
Guilford County, NC	30 (1.3)	515 (10.2)	46 (1.1)	514 (8.8)	17 (1.4)	518 (7.6)	7 (0.9)	500 (13.2)	3.0 (0.04)
Jersey City Public Schools, NJ	34 (2.5)	511 (10.6)	47 (2.1)	472 (6.7)	13 (0.9)	439 (11.6)	7 (1.0)	397 (13.7)	3.1 (0.04)
Miami-Dade County PS, FL	24 (1.7)	442 (13.5)	46 (1.5)	425 (10.3)	18 (1.8)	409 (10.2)	12 (1.5)	398 (8.2)	2.8 (0.06)
Michigan Invitational Group, MI	19 (1.1)	567 (7.0)	50 (1.8)	540 (6.3)	19 (1.5)	513 (7.5)	12 (1.1)	479 (13.8)	2.8 (0.04)
Montgomery County, MD	21 (1.4)	560 (7.2)	47 (1.5)	534 (3.9)	20 (1.5)	536 (4.9)	12 (1.3)	516 (8.7)	2.8 (0.04)
Naperville Sch. Dist. #203, IL	25 (1.0)	602 (3.9)	47 (1.5)	569 (3.7)	19 (1.4)	553 (6.2)	9 (0.9)	518 (6.7)	2.9 (0.02)
Project SMART Consortium, OH	20 (1.6)	559 (10.1)	48 (2.0)	524 (7.6)	20 (1.5)	508 (8.1)	12 (1.5)	464 (11.3)	2.8 (0.05)
Rochester City Sch. Dist., NY	30 (2.0)	466 (8.7)	45 (1.8)	453 (8.8)	14 (1.0)	429 (9.6)	11 (1.6)	407 (12.7)	3.0 (0.05)
SW Math/Sci. Collaborative, PA	25 (1.6)	543 (8.9)	48 (1.4)	518 (8.2)	17 (1.4)	497 (8.0)	9 (1.1)	484 (11.3)	2.9 (0.04)
International Avg. (All Countries)	24 (0.2)	518 (0.9)	48 (0.2)	489 (0.8)	21 (0.2)	466 (1.0)	7 (0.1)	456 (1.4)	2.9 (0.00)

SOURCE: IEA Third International Mathematics and Science Study (TIMSS), 1998-1999.

Background data provided by students.

¹ Average scale value based on: Like a lot=4; like=3; dislike=2; dislike a lot=1.

States in *italics* did not fully satisfy guidelines for sample participation rates (see Appendix A for details).

() Standard errors appear in parentheses. Because results are rounded to the nearest whole number, some totals may appear inconsistent.

A dash (-) indicates data are not available.

