

Exhibit 9.8: Resources for Conducting Science Experiments

Reported by Principals

Country	Schools Have a Science Laboratory				Teachers Have Assistance Available when Students are Conducting Experiments			
	Yes		No		Yes		No	
	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement	Percent of Students	Average Achievement
Hong Kong SAR	100 (0.0)	545 (4.2)	0 (0.0)	~ ~	98 (1.2)	544 (4.2)	2 (1.2)	~ ~
Ireland	100 (0.0)	530 (2.9)	0 (0.0)	~ ~	12 (2.9)	515 (15.1)	88 (2.9)	532 (2.9)
Malta	100 (0.0)	480 (1.6)	0 (0.0)	~ ~	92 (0.1)	479 (1.7)	8 (0.1)	489 (3.9)
Sweden	100 (0.0)	522 (3.4)	0 (0.0)	~ ~	16 (3.1)	525 (9.3)	84 (3.1)	522 (3.6)
England	r 100 (0.0)	544 (4.7)	0 (0.0)	~ ~	r 67 (4.9)	541 (6.3)	33 (4.9)	550 (11.2)
Singapore	100 (0.0)	597 (3.2)	0 (0.0)	~ ~	98 (0.0)	597 (3.2)	2 (0.0)	~ ~
New Zealand	99 (0.3)	512 (3.3)	1 (0.3)	~ ~	50 (5.4)	508 (6.0)	50 (5.4)	515 (5.5)
Japan	99 (0.6)	571 (1.8)	1 (0.6)	~ ~	38 (3.9)	579 (4.0)	62 (3.9)	566 (2.3)
Korea, Rep. of	99 (0.7)	556 (2.2)	1 (0.7)	~ ~	49 (3.8)	560 (2.9)	51 (3.8)	551 (3.1)
Australia	99 (0.9)	514 (2.9)	1 (0.9)	~ ~	69 (3.7)	515 (3.6)	31 (3.7)	511 (5.3)
Malaysia	99 (0.9)	471 (4.2)	1 (0.9)	~ ~	89 (2.9)	472 (4.4)	11 (2.9)	460 (14.2)
Bahrain	98 (0.1)	466 (2.2)	2 (0.1)	~ ~	93 (0.2)	463 (2.3)	7 (0.2)	498 (5.3)
Qatar	98 (0.0)	457 (3.1)	2 (0.0)	~ ~	91 (0.5)	451 (3.2)	9 (0.5)	513 (6.7)
United Arab Emirates	98 (1.3)	474 (2.5)	2 (1.3)	~ ~	95 (0.5)	475 (2.5)	5 (0.5)	494 (7.2)
Chinese Taipei	98 (1.0)	571 (2.1)	2 (1.0)	~ ~	88 (2.3)	572 (2.4)	12 (2.3)	554 (9.5)
Kuwait	98 (1.5)	410 (5.8)	2 (1.5)	~ ~	89 (2.9)	406 (5.8)	11 (2.9)	447 (26.0)
Oman	97 (0.8)	454 (2.7)	3 (0.8)	433 (8.6)	82 (2.5)	456 (3.0)	18 (2.5)	442 (7.4)
Egypt	96 (1.3)	373 (4.4)	4 (1.3)	347 (10.2)	94 (2.0)	375 (4.5)	6 (2.0)	315 (11.5)
Norway (9)	93 (2.4)	509 (3.1)	7 (2.4)	515 (16.0)	35 (4.4)	510 (4.6)	65 (4.4)	509 (3.9)
Thailand	93 (1.9)	457 (4.4)	7 (1.9)	442 (11.0)	22 (3.3)	472 (10.8)	78 (3.3)	451 (4.6)
Jordan	93 (1.6)	428 (3.5)	7 (1.6)	406 (11.1)	86 (2.3)	428 (3.9)	14 (2.3)	413 (8.4)
Saudi Arabia	92 (2.7)	401 (4.6)	8 (2.7)	347 (15.7)	87 (3.2)	400 (4.8)	13 (3.2)	372 (14.5)
Lebanon	89 (2.8)	406 (5.5)	11 (2.8)	339 (16.4)	75 (4.0)	402 (7.2)	25 (4.0)	388 (13.0)
Israel	88 (2.3)	509 (4.3)	12 (2.3)	487 (13.7)	85 (2.4)	508 (4.4)	15 (2.4)	499 (13.8)
Botswana (9)	87 (3.0)	394 (3.4)	13 (3.0)	380 (10.3)	54 (4.7)	390 (5.0)	46 (4.7)	397 (4.9)
Russian Federation	84 (2.9)	546 (4.3)	16 (2.9)	534 (11.6)	51 (3.1)	547 (4.6)	49 (3.1)	542 (5.9)
Kazakhstan	82 (3.3)	531 (4.7)	18 (3.3)	538 (14.5)	94 (1.8)	533 (4.5)	6 (1.8)	526 (21.3)
Morocco	80 (2.4)	396 (2.9)	20 (2.4)	384 (4.6)	44 (3.1)	399 (4.0)	56 (3.1)	390 (3.1)
Turkey	78 (2.7)	502 (4.5)	22 (2.7)	464 (9.2)	13 (2.7)	510 (11.1)	87 (2.7)	491 (4.1)
United States	74 (3.2)	534 (3.8)	26 (3.2)	524 (5.7)	27 (3.2)	536 (4.9)	73 (3.2)	529 (4.0)
Iran, Islamic Rep. of	73 (3.0)	467 (5.0)	27 (3.0)	428 (6.5)	26 (2.5)	466 (8.7)	74 (2.5)	453 (4.7)
Georgia	73 (3.1)	446 (3.3)	27 (3.1)	436 (6.7)	13 (2.8)	463 (8.6)	87 (2.8)	441 (3.4)
Italy	71 (4.2)	501 (3.4)	29 (4.2)	491 (5.5)	12 (2.2)	501 (10.8)	88 (2.2)	499 (2.9)
Canada	69 (3.2)	532 (2.4)	31 (3.2)	516 (3.7)	45 (3.1)	536 (3.2)	55 (3.1)	520 (2.6)
Chile	68 (3.8)	463 (4.8)	32 (3.8)	436 (5.8)	17 (3.6)	461 (11.7)	83 (3.6)	454 (4.3)
Slovenia	50 (4.5)	551 (3.4)	50 (4.5)	552 (3.7)	80 (3.3)	551 (3.0)	20 (3.3)	554 (4.9)
South Africa (9)	49 (2.8)	397 (8.7)	51 (2.8)	320 (5.6)	46 (3.9)	359 (7.1)	54 (3.9)	359 (10.0)
Hungary	30 (3.9)	542 (8.8)	70 (3.9)	519 (3.3)	22 (3.8)	548 (11.5)	78 (3.8)	520 (3.5)
Lithuania	11 (3.0)	528 (7.7)	89 (3.0)	518 (3.2)	15 (2.9)	519 (7.6)	85 (2.9)	519 (3.3)
International Avg.	85 (0.4)	489 (0.7)	15 (0.4)	450 (2.0)	58 (0.5)	489 (1.1)	42 (0.5)	481 (1.5)

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

Benchmarking Participants

Quebec, Canada	100 (0.0)	535 (3.4)	0 (0.0)	~ ~	95 (1.1)	536 (3.5)	5 (1.1)	522 (14.5)
Dubai, UAE	98 (0.0)	527 (2.1)	2 (0.0)	~ ~	92 (0.2)	525 (2.2)	8 (0.2)	528 (5.1)
Abu Dhabi, UAE	96 (3.3)	446 (5.5)	4 (3.3)	560 (31.7)	96 (1.1)	450 (5.7)	4 (1.1)	477 (14.6)
Florida, US	s 94 (3.7)	508 (8.9)	6 (3.7)	559 (12.0)	s 42 (8.6)	508 (14.1)	58 (8.6)	514 (10.5)
Norway (8)	94 (2.2)	491 (2.6)	6 (2.2)	494 (17.7)	36 (4.3)	485 (4.7)	64 (4.3)	494 (2.8)
Buenos Aires, Argentina	r 94 (2.4)	389 (5.6)	6 (2.4)	365 (10.6)	r 84 (4.3)	389 (5.7)	16 (4.3)	377 (18.0)
Ontario, Canada	54 (4.9)	530 (3.7)	46 (4.9)	514 (3.7)	20 (4.1)	535 (7.7)	80 (4.1)	520 (2.7)

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

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

An "r" indicates data are available for at least 70% but less than 85% of the students. An "s" indicates data are available for at least 50% but less than 70% of the students.