

Exhibit 9.7: Resources for Conducting Science Experiments

Reported by Principals

Country	Schools Have a Science Laboratory				Teachers Have Assistance 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
Korea, Rep. of	99 (0.8)	589 (2.0)	1 (0.8)	~ ~	89 (2.6)	590 (2.1)	11 (2.6)	582 (4.9)
Singapore	98 (0.0)	592 (3.7)	2 (0.0)	~ ~	69 (0.0)	595 (4.8)	31 (0.0)	583 (5.7)
Japan	97 (1.4)	569 (1.7)	3 (1.4)	593 (8.5)	28 (4.1)	569 (3.8)	72 (4.1)	570 (1.6)
Chinese Taipei	94 (1.8)	555 (1.9)	6 (1.8)	552 (4.5)	90 (2.5)	556 (1.8)	10 (2.5)	551 (7.9)
Kuwait	93 (2.5)	330 (6.9)	7 (2.5)	406 (10.2)	83 (3.7)	329 (7.0)	17 (3.7)	367 (15.6)
Bahrain	85 (0.2)	456 (2.4)	15 (0.2)	468 (8.6)	72 (0.2)	453 (2.9)	28 (0.2)	468 (4.0)
United Arab Emirates	84 (1.7)	445 (3.2)	16 (1.7)	463 (10.9)	86 (1.6)	445 (2.8)	14 (1.6)	467 (9.9)
Qatar	80 (2.4)	429 (4.3)	20 (2.4)	465 (9.6)	79 (2.8)	430 (5.1)	21 (2.8)	456 (9.4)
Saudi Arabia	74 (3.3)	393 (5.9)	26 (3.3)	382 (10.3)	65 (3.5)	394 (6.5)	35 (3.5)	384 (9.9)
Poland	68 (3.9)	550 (2.7)	32 (3.9)	542 (4.1)	56 (4.1)	550 (3.2)	44 (4.1)	544 (3.3)
Cyprus	65 (4.1)	482 (3.1)	35 (4.1)	479 (4.0)	23 (3.9)	481 (5.3)	77 (3.9)	481 (3.1)
Chile	61 (4.0)	487 (4.2)	39 (4.0)	464 (4.3)	22 (3.6)	486 (7.3)	78 (3.6)	476 (3.6)
Denmark	r 51 (3.9)	530 (2.6)	49 (3.9)	529 (3.7)	r 15 (3.1)	526 (6.4)	85 (3.1)	530 (2.4)
Georgia	50 (4.3)	465 (5.4)	50 (4.3)	437 (5.6)	12 (3.0)	485 (16.4)	88 (3.0)	446 (3.7)
Turkey	44 (2.9)	504 (4.5)	56 (2.9)	468 (4.9)	8 (1.8)	525 (12.3)	92 (1.8)	479 (3.6)
Portugal	41 (4.0)	510 (3.7)	59 (4.0)	507 (2.7)	38 (3.8)	509 (3.4)	62 (3.8)	508 (2.7)
Czech Republic	40 (4.4)	532 (3.5)	60 (4.4)	536 (2.7)	4 (2.1)	510 (19.7)	96 (2.1)	535 (2.3)
Hong Kong SAR	38 (4.5)	565 (6.4)	62 (4.5)	551 (4.9)	42 (4.6)	558 (5.5)	58 (4.6)	556 (5.0)
Iran, Islamic Rep. of	37 (3.3)	437 (7.8)	63 (3.3)	415 (5.6)	11 (2.0)	461 (10.5)	89 (2.0)	419 (4.7)
Kazakhstan	35 (3.8)	562 (7.7)	65 (3.8)	543 (5.3)	60 (4.0)	556 (5.9)	40 (4.0)	540 (6.6)
Russian Federation	34 (4.2)	565 (5.2)	66 (4.2)	568 (4.0)	29 (3.1)	564 (5.3)	71 (3.1)	568 (4.4)
Spain	32 (2.7)	526 (3.6)	68 (2.7)	514 (3.3)	21 (3.1)	527 (4.3)	79 (3.1)	516 (3.1)
Italy	31 (3.8)	515 (4.7)	69 (3.8)	518 (3.2)	9 (2.5)	519 (8.0)	91 (2.5)	516 (2.9)
Norway (5)	31 (3.9)	539 (5.0)	69 (3.9)	536 (3.2)	20 (3.8)	529 (4.8)	80 (3.8)	539 (3.1)
Sweden	31 (3.5)	536 (7.2)	69 (3.5)	543 (3.7)	28 (4.4)	535 (8.9)	72 (4.4)	544 (3.7)
Oman	31 (2.6)	421 (5.5)	69 (2.6)	437 (4.1)	32 (3.0)	425 (6.2)	68 (3.0)	432 (4.3)
United States	29 (3.0)	546 (6.7)	71 (3.0)	546 (2.9)	22 (2.6)	542 (6.9)	78 (2.6)	547 (2.8)
Slovak Republic	27 (3.3)	519 (5.7)	73 (3.3)	521 (3.2)	10 (2.2)	481 (13.3)	90 (2.2)	525 (3.0)
Finland	25 (4.0)	555 (3.2)	75 (4.0)	554 (2.8)	29 (3.7)	552 (4.8)	71 (3.7)	555 (2.4)
Slovenia	23 (3.7)	537 (5.8)	77 (3.7)	545 (2.4)	31 (4.3)	541 (4.3)	69 (4.3)	544 (2.8)
Croatia	22 (3.1)	535 (4.3)	78 (3.1)	533 (2.3)	19 (3.6)	544 (3.8)	81 (3.6)	531 (2.2)
Serbia	18 (3.2)	532 (5.5)	82 (3.2)	523 (4.3)	32 (4.3)	533 (4.8)	68 (4.3)	521 (4.8)
Indonesia	16 (2.5)	454 (9.5)	84 (2.5)	386 (4.9)	9 (1.8)	390 (16.2)	91 (1.8)	397 (5.3)
Germany	15 (2.4)	519 (7.7)	85 (2.4)	529 (2.7)	4 (1.4)	522 (7.2)	96 (1.4)	528 (2.6)
Australia	13 (2.1)	521 (5.2)	87 (2.1)	524 (3.4)	13 (2.1)	529 (6.0)	87 (2.1)	523 (3.4)
Hungary	12 (2.8)	544 (11.1)	88 (2.8)	542 (3.6)	17 (3.1)	554 (6.0)	83 (3.1)	540 (3.9)
Canada	11 (2.0)	521 (4.8)	89 (2.0)	525 (2.9)	14 (1.9)	531 (5.5)	86 (1.9)	524 (2.9)
England	8 (1.4)	592 (10.2)	92 (1.4)	532 (2.6)	62 (4.5)	535 (4.0)	38 (4.5)	541 (5.5)
New Zealand	6 (1.6)	549 (8.0)	94 (1.6)	505 (3.1)	10 (2.4)	493 (13.3)	90 (2.4)	509 (3.2)
Morocco	5 (1.4)	469 (17.5)	95 (1.4)	347 (4.9)	30 (2.7)	375 (11.2)	70 (2.7)	342 (4.9)
Bulgaria	4 (1.6)	470 (40.9)	96 (1.6)	538 (5.5)	1 (0.5)	~ ~	99 (0.5)	536 (6.0)
Belgium (Flemish)	2 (1.5)	~ ~	98 (1.5)	514 (2.3)	62 (4.2)	509 (3.2)	38 (4.2)	520 (4.4)
Lithuania	2 (1.0)	~ ~	98 (1.0)	528 (2.5)	4 (1.5)	539 (8.5)	96 (1.5)	527 (2.5)
Netherlands	s 1 (1.5)	~ ~	99 (1.5)	524 (3.1)	s 20 (4.4)	526 (5.8)	80 (4.4)	524 (3.4)
Ireland	1 (0.9)	~ ~	99 (0.9)	529 (2.4)	8 (2.4)	522 (8.9)	92 (2.4)	529 (2.7)
France	1 (0.9)	~ ~	99 (0.9)	486 (2.9)	2 (0.9)	~ ~	98 (0.9)	486 (2.9)
Northern Ireland	r 0 (0.0)	~ ~	100 (0.0)	519 (2.5)	r 17 (4.0)	507 (8.1)	83 (4.0)	522 (2.7)
International Avg.	38 (0.4)	511 (1.4)	62 (0.4)	504 (0.7)	32 (0.5)	507 (1.2)	68 (0.5)	507 (0.7)

() 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.

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

Exhibit 9.7: Resources for Conducting Science Experiments (Continued)

Country	Schools Have a Science Laboratory				Teachers Have Assistance 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	
Benchmarking Participants									
Dubai, UAE	85 (0.2)	512 (2.0)	15 (0.2)	540 (4.1)	81 (0.2)	510 (2.2)	19 (0.2)	542 (4.0)	
Abu Dhabi, UAE	81 (3.8)	402 (8.0)	19 (3.8)	434 (27.0)	90 (3.1)	411 (6.5)	10 (3.1)	395 (27.0)	
Buenos Aires, Argentina	66 (4.5)	423 (6.7)	34 (4.5)	411 (9.5)	35 (5.0)	434 (10.1)	65 (5.0)	411 (6.8)	
Florida, US	34 (6.4)	549 (9.0)	66 (6.4)	551 (6.7)	19 (6.4)	553 (15.1)	81 (6.4)	550 (5.6)	
Norway (4)	29 (3.7)	496 (5.5)	71 (3.7)	492 (2.4)	19 (3.6)	496 (5.4)	81 (3.6)	493 (2.6)	
Quebec, Canada	12 (3.8)	522 (5.6)	88 (3.8)	525 (4.6)	14 (4.0)	523 (10.5)	86 (4.0)	525 (4.2)	
Ontario, Canada	7 (2.7)	511 (11.8)	93 (2.7)	531 (2.8)	10 (3.0)	544 (8.4)	90 (3.0)	528 (2.8)	

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