Exhibit 9.4: Percentages of Students Taught the TIMSS Science Topics*

Reported by Teachers

Country	All Science (22 topics)	Biology (7 topics)	Chemistry (6 topics)	Physics (5 topics)	Earth Science (4 topics)
Australia	r 59 (1.0)	r 55 (1.2)	r 61 (1.3)	r 54 (1.3)	r 67 (2.4)
Bahrain	84 (0.6)	90 (1.0)	80 (0.8)	75 (1.4)	93 (1.1)
Botswana (9)	60 (1.3)	88 (1.4)	42 (1.6)	50 (2.4)	50 (2.6)
Canada	r 67 (1.1)	r 73 (1.5)	r 54 (1.7)	r 61 (1.8)	r 81 (2.2)
Chile	r 83 (1.3)	r 85 (1.9)	r 81 (2.1)	r 81 (2.0)	r 87 (2.4)
Chinese Taipei	67 (1.0)	89 (2.6)	89 (0.7)	61 (1.1)	5 (1.5)
Egypt	82 (1.0)	82 (1.3)	81 (1.4)	82 (1.2)	85 (1.9)
England	r 81 (1.0)	r 83 (1.4)	r 78 (1.1)	r 85 (1.3)	r 77 (1.9)
Georgia	70 (0.8)	55 (1.8)	69 (1.7)	68 (1.6)	98 (0.6)
Hong Kong SAR	55 (1.3)	64 (2.2)	46 (1.9)	72 (1.6)	34 (3.1)
Hungary	87 (0.7)	79 (1.2)	99 (0.5)	86 (0.9)	85 (1.9)
Iran, Islamic Rep. of	76 (1.2)	70 (1.6)	81 (1.4)	81 (1.6)	76 (1.9)
Ireland	66 (0.8)	66 (1.3)	84 (1.3)	69 (1.4)	r 34 (2.1)
Israel	70 (1.3)	65 (1.9)	86 (1.1)	78 (1.3)	44 (2.8)
Italy	79 (1.0)	86 (1.1)	86 (1.8)	67 (1.6)	71 (2.5)
Japan	60 (0.8)	56 (1.2)	67 (1.1)	73 (1.4)	40 (1.7)
Jordan	89 (0.9)	89 (1.0)	90 (1.1)	85 (1.5)	90 (1.5)
Kazakhstan	82 (0.7)	68 (1.5)	84 (1.4)	85 (0.9)	96 (0.9)
Korea, Rep. of	60 (1.0)	49 (1.6)	59 (1.4)	76 (1.1)	64 (1.5)
Kuwait	80 (1.3)	81 (1.6)	81 (1.5)	75 (1.5)	80 (2.5)
Lebanon	r 83 (1.3)	r 80 (2.5)	85 (1.7)	86 (2.7)	- -
Lithuania	74 (1.0)	77 (1.8)	63 (1.8)	67 (2.3)	91 (1.2)
Malaysia	61 (1.5)	64 (1.6)	64 (1.8)	72 (1.7)	37 (2.6)
Malta	r 61 (0.3)	r 48 (0.5)	r 82 (0.7)	53 (0.3)	59 (0.2)
Morocco	63 (0.8)	70 (0.9)	54 (1.1)	57 (1.4)	r 75 (1.7)
New Zealand	50 (1.2)	47 (2.0)	58 (1.8)	55 (1.7)	40 (2.4)
Norway (9)	63 (1.0)	55 (1.6)	81 (1.6)	46 (1.7)	71 (2.1)
Oman	81 (0.8)	82 (0.8)	72 (1.3)	81 (1.5)	93 (1.3)
Qatar	77 (1.1)	74 (1.5)	77 (1.5)	83 (1.4)	75 (1.7)
Russian Federation	- -	- -	- -	- -	- -
Saudi Arabia	85 (1.1)	85 (1.5)	88 (1.3)	77 (1.9)	90 (1.8)
Singapore	68 (0.9)	69 (1.4)	78 (1.3)	85 (1.0)	28 (2.1)
Slovenia	70 (0.6)	72 (1.0)	80 (1.0)	43 (1.4)	87 (1.5)
South Africa (9)	79 (1.5)	85 (1.6)	88 (1.3)	76 (2.3)	56 (3.3)
Sweden	71 (0.9)	66 (1.3)	74 (1.5)	74 (1.7)	- -
Thailand	73 (1.1)	67 (2.0)	85 (1.5)	69 (1.5)	72 (1.6)
Turkey	87 (0.7)	90 (0.9)	100 (0.2)	94 (0.8)	55 (2.5)
United Arab Emirates	s 82 (0.8)	s 80 (1.1)	s 84 (0.8)	s 82 (1.2)	s 85 (1.2)
United States	r 85 (1.1)	r 90 (1.1)	r 82 (1.7)	r 76 (1.8)	r 90 (1.2)
International Avg.	73 (0.2)	73 (0.2)	76 (0.2)	72 (0.3)	68 (0.3)

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

* Percentage mostly taught before or in the assessment year averaged across topics.

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

A dash (-) indicates comparable data not available.

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. An "x" indicates data are available for less than 50% of students.

Exhibit 9.4: Percentages of Students Taught the TIMSS Science Topics* (Continued)

Country	All Science (22 topics)	Biology (7 topics)	Chemistry (6 topics)	Physics (5 topics)	Earth Science (4 topics)
Benchmarking Participants					
Buenos Aires, Argentina	x x	x x	x x	x x	x x
Ontario, Canada	r 68 (1.5)	r 79 (1.9)	r 48 (2.4)	r 68 (2.5)	r 78 (3.0)
Quebec, Canada	66 (1.8)	66 (2.4)	66 (2.9)	48 (2.6)	87 (3.0)
Norway (8)	41 (1.2)	39 (1.5)	52 (2.1)	25 (1.5)	49 (2.4)
Abu Dhabi, UAE	r 85 (1.4)	r 83 (2.1)	r 83 (1.8)	r 87 (1.8)	r 87 (2.4)
Dubai, UAE	s 79 (0.7)	s 77 (1.0)	r 83 (0.8)	s 74 (1.2)	s 83 (1.2)
Florida, US	s 90 (2.0)	s 90 (2.4)	s 86 (3.8)	s 86 (2.3)	s 98 (1.4)

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

TIMSS 2015 Science Topics

A. Biology

1) Differences among major taxonomic groups of organisms
2) Major organs and organ systems in humans and other organisms
3) Cells, their structure and functions, including respiration and photosynthesis as cellular processes
4) Life cycles, sexual reproduction, and heredity
5) Role of variation and adaptation in survival/extinction of species in a changing environment
6) Interdependence of populations of organisms in an ecosystem and factors affecting population size in an ecosystem
7) Human health and the importance of diet and exercise in maintaining health

B. Chemistry

1) Classification, composition, and particulate structure of matter
2) Physical and chemical properties of matter
3) Mixtures and solutions
4) Properties and uses of common acids and bases
5) Chemical change
6) The role of electrons in chemical bonds

C. Physics

1) Physical states and changes in matter
2) Energy forms, transformations, heat, and temperature
3) Basic properties/behaviors of light and sound
4) Electric circuits and properties and uses of permanent magnets and electromagnets
5) Forces and motion

D. Earth Science

1) Earth's structure and physical features
2) Earth's processes, cycles, and history
3) Earth's resources, their use and conservation
4) Earth in the solar system and the universe