

**Exhibit 5.3.7: Teachers Emphasize Science Inquiry – Teachers' Reports**
**About the Items**

Exhibit 5.3.8 reports the percentage of students whose teachers responded "a lot" to each of five items.

**How much emphasis do you place on the following when teaching science to students in this class?**

	A lot	Some	None
1) Encouraging students to ask questions about scientific phenomena -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2) Having students predict the outcomes of experiments or investigations -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3) Having students create representations (e.g., models, graphs) to explain scientific phenomena -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4) Having students use scientific concepts to explain phenomena -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5) Having students conduct experiments (hands-on or virtually) -----	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## Exhibit 5.3.8: Teachers Emphasize Science Inquiry – Teachers' Reports

Country	Percent of Students Whose Teachers Place "A lot" of Emphasis on Science Inquiry Practices				
	Ask Questions about Scientific Phenomena	Predict the Outcomes of Experiments or Investigations	Create Representations to Explain Scientific Phenomena	Use Scientific Concepts to Explain Phenomena	Conduct Experiments
Albania	r 88 (3.8)	r 77 (5.2)	r 59 (6.2)	r 73 (5.5)	r 67 (5.7)
Armenia	r 91 (2.3)	r 52 (4.1)	r 44 (4.4)	r 58 (4.3)	r 42 (3.9)
Australia	s 72 (3.8)	s 81 (3.0)	s 36 (4.1)	s 45 (3.7)	s 54 (4.3)
Azerbaijan	r 82 (3.1)	r 64 (3.9)	r 57 (4.1)	r 67 (3.5)	r 43 (3.9)
Bahrain	r 94 (1.6)	r 87 (2.3)	r 55 (3.4)	r 77 (3.7)	r 65 (3.8)
Belgium (Flemish)	r 51 (3.5)	r 50 (4.3)	r 6 (2.2)	r 7 (1.7)	r 17 (2.8)
Belgium (French)	r 88 (2.4)	r 87 (2.4)	r 48 (3.2)	r 52 (3.6)	r 62 (2.8)
Bosnia & Herzegovina	r 92 (2.5)	r 73 (4.2)	r 26 (3.7)	r 43 (5.0)	r 26 (4.8)
Brazil	r 83 (2.4)	r 60 (3.0)	r 33 (3.8)	r 35 (3.4)	r 38 (3.0)
Bulgaria	r 89 (2.4)	r 59 (4.2)	r 58 (3.7)	r 63 (3.6)	r 35 (3.6)
Canada	r 83 (1.9)	r 75 (2.3)	r 29 (2.0)	r 48 (2.5)	r 45 (2.3)
Chile	r 83 (3.1)	r 72 (3.7)	r 65 (3.9)	r 60 (3.9)	r 57 (4.1)
Chinese Taipei	r 69 (3.3)	r 59 (3.5)	r 27 (3.3)	r 53 (3.9)	r 81 (2.8)
Cyprus	r 85 (2.6)	r 96 (1.6)	r 39 (3.7)	r 81 (3.2)	r 67 (3.2)
Czech Republic	r 71 (2.8)	r 41 (3.2)	r 18 (3.1)	r 11 (2.0)	r 24 (2.7)
Denmark	s 71 (3.7)	s 68 (4.0)	s 30 (3.9)	s 35 (4.3)	s 42 (4.2)
England	r 74 (4.6)	r 91 (2.7)	r 38 (4.2)	r 70 (4.8)	r 65 (4.3)
Finland	r 61 (2.9)	r 20 (2.6)	r 4 (1.1)	r 17 (2.6)	r 5 (1.6)
France	r 71 (3.9)	r 62 (3.9)	r 33 (3.5)	r 31 (3.5)	r 36 (3.8)
Georgia	r 54 (3.9)	r 53 (4.0)	r 34 (4.0)	r 22 (3.5)	r 35 (3.7)
Germany	r 80 (2.4)	r 67 (3.3)	r 24 (3.1)	r 27 (3.4)	r 61 (3.5)
Hong Kong SAR	s 54 (4.8)	s 60 (4.8)	s 17 (3.9)	s 46 (4.7)	s 39 (4.6)
Hungary	r 77 (3.0)	r 54 (3.8)	r 18 (3.1)	r 25 (3.3)	r 17 (2.9)
Iran, Islamic Rep. of	r 83 (2.9)	r 77 (3.0)	r 59 (3.4)	r 58 (3.2)	r 76 (2.7)
Ireland	r 71 (3.0)	r 84 (2.9)	r 16 (2.6)	r 24 (3.3)	r 33 (4.0)
Italy	r 94 (1.4)	r 79 (3.2)	r 47 (3.1)	r 57 (3.6)	r 63 (3.4)
Japan	r 59 (4.2)	r 88 (2.9)	r 74 (4.0)	r 58 (4.6)	r 88 (2.9)
Jordan	r 84 (3.1)	r 79 (3.3)	r 48 (4.5)	r 69 (4.2)	r 64 (4.6)
Kazakhstan	r 75 (3.0)	r 65 (3.6)	r 49 (3.7)	r 57 (4.0)	r 53 (3.9)
Korea, Rep. of	r 42 (4.1)	r 67 (4.2)	r 21 (3.5)	r 53 (4.5)	r 72 (4.1)
Kosovo	r 90 (2.6)	r 49 (4.7)	r 53 (4.2)	r 35 (4.2)	r 39 (3.9)
Kuwait	r 79 (3.2)	r 84 (3.0)	r 39 (4.2)	r 67 (3.8)	r 70 (3.2)
Latvia	r 76 (3.6)	r 64 (3.9)	r 48 (4.1)	r 50 (3.9)	r 62 (4.2)
Lithuania	r 60 (3.6)	r 56 (3.7)	r 45 (3.5)	r 43 (3.4)	r 57 (3.6)
Macao SAR	r 74 (0.1)	r 76 (0.1)	r 33 (0.1)	r 55 (0.1)	r 59 (0.1)
Montenegro	r 94 (1.5)	r 79 (2.6)	r 51 (3.1)	r 50 (2.9)	r 57 (3.0)
Morocco	r 95 (1.7)	r 87 (2.4)	r 38 (4.2)	r 68 (3.6)	r 32 (4.3)
Netherlands	s 43 (5.2)	s 32 (5.1)	s 7 (2.6)	s 7 (2.2)	s 17 (3.8)
New Zealand	s 66 (4.4)	s 69 (4.0)	s 26 (3.3)	s 28 (3.8)	s 49 (4.2)
North Macedonia	r 90 (2.4)	r 73 (3.8)	r 49 (3.8)	r 56 (4.2)	r 60 (4.2)
Norway (5)	s 65 (4.0)	s 53 (3.9)	s 12 (2.2)	s 31 (3.7)	s 17 (3.1)
Oman	r 74 (3.1)	r 91 (1.9)	r 71 (3.1)	r 77 (2.8)	r 77 (2.8)
Poland	r 87 (2.7)	r 60 (3.9)	r 31 (3.6)	r 36 (3.8)	r 30 (3.9)
Portugal	r 89 (1.9)	r 89 (2.0)	r 36 (3.3)	r 51 (3.5)	r 49 (3.8)
Qatar	r 92 (1.9)	r 92 (2.0)	r 67 (3.4)	r 77 (3.0)	r 72 (3.1)
Romania	s 90 (4.1)	s 73 (4.7)	s 42 (4.7)	s 42 (5.5)	s 51 (5.5)
Saudi Arabia	r 91 (2.2)	r 85 (2.7)	r 44 (3.9)	r 78 (3.1)	r 71 (3.7)
Serbia	r 86 (2.9)	r 72 (3.6)	r 43 (3.8)	r 39 (3.8)	r 41 (4.1)
Singapore	r 63 (2.8)	r 75 (2.3)	r 17 (2.2)	r 65 (2.7)	r 61 (2.7)
Slovak Republic	r 61 (3.5)	r 62 (2.9)	r 39 (3.3)	r 36 (3.2)	r 51 (2.9)
Slovenia	r 69 (3.0)	r 63 (3.2)	r 26 (3.5)	r 13 (2.5)	r 33 (3.2)
South Africa (5)	r 83 (3.2)	r 67 (3.8)	r 30 (4.0)	r 46 (4.2)	r 38 (4.1)
Spain	r 84 (1.9)	r 72 (2.5)	r 51 (2.7)	r 55 (2.5)	r 61 (2.9)
Sweden	r 79 (3.2)	r 65 (4.2)	r 17 (3.7)	r 66 (4.5)	r 51 (4.1)
Türkiye (5)	r 64 (4.1)	r 88 (2.6)	r 61 (4.1)	r 60 (4.2)	r 64 (4.2)
United Arab Emirates	r 89 (1.1)	r 87 (1.1)	r 59 (1.5)	r 74 (1.4)	r 72 (1.5)
United States	r 73 (2.4)	r 69 (2.4)	r 32 (2.5)	r 40 (2.4)	r 42 (2.7)
Uzbekistan	r 87 (3.1)	r 71 (4.1)	r 71 (4.3)	r 79 (3.7)	r 72 (4.4)
<b>International Average</b>	<b>77 (0.4)</b>	<b>70 (0.4)</b>	<b>39 (0.5)</b>	<b>49 (0.5)</b>	<b>50 (0.5)</b>
<b>Benchmarking Participants</b>					
Ontario, Canada	r 80 (3.2)	r 70 (4.0)	r 30 (2.9)	r 44 (3.9)	r 31 (3.5)
Quebec, Canada	r 89 (2.7)	r 80 (3.6)	r 25 (3.6)	r 57 (4.3)	r 60 (4.1)
Abu Dhabi, UAE	r 85 (2.8)	r 84 (2.0)	r 49 (2.6)	r 69 (2.0)	r 64 (2.7)
Dubai, UAE	r 92 (1.3)	r 93 (1.3)	r 64 (2.5)	r 78 (2.1)	r 79 (2.4)
Sharjah, UAE	r 95 (1.9)	r 90 (2.6)	r 70 (4.1)	r 80 (3.7)	r 78 (3.5)

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

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.