

## Exhibit 12: Number of TIMSS Science Topics Intended to Be Taught by the End of Fourth Grade

Reported by National Research Coordinators

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|--|---|--|---|---|--|---|---|--|---|--|--|--|--|
| . ,  | All Science<br>(23 topics)                              |  |   | Life Science<br>(7 topics)                              |  |   | Physical Science<br>(9 topics)                          |  |   | Topics Taught to All or Almost All Students Top Taught to Only the More Able Students (Top Track) Topics Taught to Only the More Able Students (Top Track) Topics Taught to Only the More Able Students Through Grade 4  TO TO TOPICS Taught to Only the More Able Students Through Through Topics Topics Taught to Only the More Able Students Through Topics Through Through Topics Topics Through Through Topics Topics Through Through Topics Topics Through Through Topics Through Through Through Topics Through Through Through Topics Through Th |  |  |  |
| Country  | Topics<br>Taught to<br>All or<br>Almost All<br>Students | Topics Taught to Only the More Able Students (Top Track) | Not<br>Included in<br>the<br>Curriculum<br>Through<br>Grade 4 | Topics<br>Taught to<br>All or<br>Almost All<br>Students | Topics Taught to Only the More Able Students (Top Track) | Not<br>Included in<br>the<br>Curriculum<br>Through<br>Grade 4 | Topics<br>Taught to<br>All or<br>Almost All<br>Students | Topics Taught to Only the More Able Students (Top Track) | Not<br>Included in<br>the<br>Curriculum<br>Through<br>Grade 4 | Topics<br>Taught to<br>All or<br>Almost All<br>Students  | Topics Taught to Only the More Able Students (Top Track) | Not<br>Included<br>the<br>Curricului<br>Through<br>Grade 4 |  |
| Armenia  | 23  | 0  | 0   | 7   | 0  | 0   | 9   | 0  | 0   | 7  | 0  | 0  |  |
| Australia  | 8   | 6  | 8   | 3   | 1  | 3   | 2   | 3  | 3   | 3  | 2  | 2  |  |
| Bahrain  | 20  | 0  | 3   | 5   | 0  | 2   | 9   | 0  | 0   | 6  | 0  | 1  |  |
| Belgium (Flemish)  | 23  | 0  | 0   | 7   | 0  | 0   | 9   | 0  | 0   | 7  | 0  | 0  |  |
| Bulgaria   | 19  | 0  | 4   | 6   | 0  | 1   | 7   | 0  | 2   | 6  | 0  | 1  |  |
| Canada   | 13  | 0  | 10  | 5   | 0  | 2   | 6   | 0  | 3   | 2  | 0  | 5  |  |
| Chile  | 17  | 0  | 6   | 6   | 0  | 1   | 6   | 0  | 3   | 5  | 0  | 2  |  |
| Chinese Taipei   | 15  | 0  | 8   | 6   | 0  | 1   | 7   | 0  | 2   | 2  | 0  | 5  |  |
| Croatia  | 6   | 0  | 17  | 3   | 0  | 4   | 1   | 0  | 8   | 2  | 0  | 5  |  |
| Cyprus   | 19  | 0  | 4   | 6   | 0  | 1   | 7   | 0  | 2   | 6  | 0  | 1  |  |
| Czech Republic   | 12  | 3  | 8   | 7   | 0  | 0   | 2   | 0  | 7   | 3  | 3  | 1  |  |
| Denmark  | 20  | 2  | 1   | 6   | 0  | 1   | 8   | 1  | 0   | 6  | 1  | 0  |  |
| England  | 22  | 0  | 1   | 7   | 0  | 0   | 9   | 0  | 0   | 6  | 0  | 1  |  |
| Finland  | 13  | 0  | 10  | 4   | 0  | 3   | 5   | 0  | 4   | 4  | 0  | 3  |  |
| France   | 16  | 1  | 6   | 5   | 1  | 1   | 5   | 0  | 4   | 6  | 0  | 1  |  |
| Georgia  | 14  | 1  | 8   | 5   | 0  | 2   | 5   | 0  | 4   | 4  | 1  | 2  |  |
| Germany  | 20  | 0  | 3   | 6   | 0  | 1   | 9   | 0  | 0   | 5  | 0  | 2  |  |
| •  |   | 1  |   | 5   |  |   |   |  |   |  | 1  |  |  |
| Hong Kong SAR  | 14  |  | 8   | _   | 0  | 2   | 5   | 0  | 4   | 4  | •  | 2  |  |
| Hungary  | 13  | 0  | 10  | 6   | 0  | 1   | 6   | 0  | 3   | 1  | 0  | 6  |  |
| Indonesia  | 11  | 0  | 12  | 5   | 0  | 2   | 4   | 0  | 5   | 2  | 0  | 5  |  |
| Iran, Islamic Rep. of  | 23  | 0  | 0   | 7   | 0  | 0   | 9   | 0  | 0   | 7  | 0  | 0  |  |
| Ireland  | 17  | 0  | 6   | 4   | 0  | 3   | 9   | 0  | 0   | 4  | 0  | 3  |  |
| Italy  | 10  | 0  | 13  | 4   | 0  | 3   | 3   | 0  | 6   | 3  | 0  | 4  |  |
| Japan  | 16  | 1  | 6   | 4   | 0  | 3   | 7   | 1  | 1   | 5  | 0  | 2  |  |
| Kazakhstan   | 18  | 0  | 5   | 7   | 0  | 0   | 4   | 0  | 5   | 7  | 0  | 0  |  |
| Korea, Rep. of   | 12  | 0  | 11  | 4   | 0  | 3   | 5   | 0  | 4   | 3  | 0  | 4  |  |
| Kuwait   | 23  | 0  | 0   | 7   | 0  | 0   | 9   | 0  | 0   | 7  | 0  | 0  |  |
| Lithuania  | 18  | 2  | 3   | 6   | 0  | 1   | 6   | 1  | 2   | 6  | 1  | 0  |  |
| Morocco  | 12  | 0  | 11  | 6   | 0  | 1   | 4   | 0  | 5   | 2  | 0  | 5  |  |
| Netherlands  | -   | -  | -   | -   | -  | -   | -   | -  | -   | -  | -  | -  |  |
| New Zealand  | 15  | 7  | 1   | 4   | 2  | 1   | 6   | 3  | 0   | 5  | 2  | 0  |  |
| Northern Ireland   | 22  | 0  | 1   | 7   | 0  | 0   | 8   | 0  | 1   | 7  | 0  | 0  |  |
| Norway   | 7   | 0  | 16  | 4   | 0  | 3   | 0   | 0  | 9   | 3  | 0  | 4  |  |
| Oman   | 12  | 1  | 10  | 6   | 0  | 1   | 4   | 0  | 5   | 2  | 1  | 4  |  |
| Poland   | 11  | 0  | 12  | 5   | 0  | 2   | 3   | 0  | 6   | 3  | 0  | 4  |  |
| Portugal   | 23  | 0  | 0   | 7   | 0  | 0   | 9   | 0  | 0   | 7  | 0  | 0  |  |
| Qatar  | 20  | 2  | 3   | 7   | 0  | 0   | 9   | 0  | 0   | 4  | 2  | 3  |  |
| Russian Federation   | 12  | 0  | 11  | 6   | 0  | 1   | 1   | 0  | 8   | 5  | 0  | 2  |  |
| Saudi Arabia   | 23  | 0  | 0   | 7   | 0  | 0   | 9   | 0  | 0   | 7  | 0  | 0  |  |
| Serbia   | 19  | 0  | 4   | 7   | 0  | 0   | 9   | 0  | 0   | 3  | 0  | 4  |  |
| Singapore  | 7   | 0  | 16  | 3   | 0  | 4   | 4   | 0  | 5   | 0  | 0  | 7  |  |
| Slovak Republic  | 17  | 0  | 6   | 4   | 0  | 3   | 8   | 0  | 1   | 5  | 0  | 2  |  |
| Slovenia   | 17  | 0  | 6   | 5   | 0  | 2   | 8   | 0  | 1   | 4  | 0  | 3  |  |
| Spain  | 16  | 0  | 7   | 6   | 0  | 1   | 4   | 0  | 5   | 6  | 0  | 1  |  |
| Sweden   | 22  | 0  | 1   | 7   | 0  | 0   | 9   | 0  | 0   | 6  | 0  | 1  |  |
| Turkey   | 16  | 0  | 7   | 4   | 0  | 3   | 7   | 0  | 2   | 5  | 0  | 2  |  |
| United Arab Emirates   | 17  | 1  | 5   | 5   | 1  | 1   | 9   | 0  | 0   | 3  | 0  | 4  |  |
| United States  | 21  | 0  | 2   | 7   | 0  | 0   | 8   | 0  | 1   | 6  | 0  | 1  |  |
| nternational Avg.  | 16  | 1  | 6   | 6   | 0  | 1   | 6   | 0  | 3   | 5  | 0  | 2  |  |
| nchmarking Participants—I  |   |  |   |   |  |   |   |  |   |  |  |  |  |
| Buenos Aires, Argentina  | 8   | 0  | 15  | 1   | 0  | 6   | 4   | 0  | 5   | 3  | 0  | 4  |  |
|  |   | 0  | 4   | 6   | 0  | 1   | 9   | 0  | 0   | 4  | 0  | 3  |  |
| Ontario, Canada  | 19  | 0  |   |   |  |   |   |  |   |  |  |  |  |
| Ontario, Canada<br>Quebec, Canada  | 9   | 1  | 13  | 3   | 0  | 4   | 4   | 1  | 4   | 2  | 0  | 5  |  |
| Ontario, Canada<br>Quebec, Canada<br>Abu Dhabi, UAE                              | 9<br>16   | 1  | 13<br>7   | 3 5   | 0  | 2   | 6   | 0  | 3   | 5  | 0  | 2  |  |
| Ontario, Canada<br>Quebec, Canada<br>Abu Dhabi, UAE<br>Dubai, UAE<br>Florida, US | 9   | 1  | 13  | 3   |  |   |   |  |   |  |  |  |  |

A dash (-) indicates data not provided.

