

**Exhibit 15: Methods Used to Evaluate the Implementation of Mathematics and Science Curricula at the Fourth Grade**

Reported by National Research Coordinators

| Country               | Visits by Inspectors         |                              | Research Programs |         | School Self-Evaluation |         | National or Regional Examinations |         |
|-----------------------|------------------------------|------------------------------|-------------------|---------|------------------------|---------|-----------------------------------|---------|
|                       | Mathematics                  | Science                      | Mathematics       | Science | Mathematics            | Science | Mathematics                       | Science |
| Armenia               | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ●                                 | ○       |
| Australia             | ○                            | ○                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| Bahrain               | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| Belgium (Flemish)     | ●                            | ●                            | ●                 | ○       | ●                      | ●       | ●                                 | ●       |
| Bulgaria              | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ●                                 | ●       |
| Canada                | ○                            | ○                            | ○                 | ○       | ○                      | ○       | ●                                 | ○       |
| Chile                 | ○                            | ○                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| Chinese Taipei        | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| Croatia               | ●                            | ●                            | ○                 | ○       | ○                      | ○       | ○                                 | ○       |
| Cyprus                | ●                            | ●                            | ○                 | ○       | ○                      | ○       | ○                                 | ○       |
| Czech Republic        | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ○                                 | ○       |
| Denmark               | ○                            | ○                            | ○                 | ○       | ●                      | ●       | ○                                 | ○       |
| England               | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ○       |
| Finland               | ○                            | ○                            | ●                 | ●       | ●                      | ●       | ●                                 | ●       |
| France                | ●                            | ●                            | ○                 | ○       | ○                      | ○       | ○                                 | ○       |
| Georgia               | ○                            | ○                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| Germany               | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ○       |
| Hong Kong SAR         | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ●                                 | ○       |
| Hungary               | ○                            | ○                            | ●                 | ●       | ●                      | ●       | ●                                 | ●       |
| Indonesia             | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ○                                 | ○       |
| Iran, Islamic Rep. of | ○                            | ○                            | ●                 | ●       | ○                      | ○       | ○                                 | ○       |
| Ireland               | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ●                                 | ○       |
| Italy                 | ○                            | ○                            | ○                 | ○       | ●                      | ●       | ●                                 | ○       |
| Japan                 | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ●                                 | ●       |
| Jordan                | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ●                                 | ●       |
| Kazakhstan            | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ○                                 | ○       |
| Korea, Rep. of        | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ○                                 | ○       |
| Kuwait                | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| Lithuania             | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ○                                 | ○       |
| Morocco               | ●                            | ●                            | ●                 | ●       | ○                      | ○       | ●                                 | ●       |
| Netherlands           | ●                            | ●                            | ○                 | ○       | ●                      | ○       | ○                                 | ○       |
| New Zealand           | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ○                                 | ○       |
| Northern Ireland      | ●                            | ●                            | ○                 | ●       | ●                      | ●       | ○                                 | ○       |
| Norway                | ○                            | ○                            | ○                 | ○       | ○                      | ○       | ○                                 | ○       |
| Oman                  | ●                            | ●                            | ●                 | ●       | ○                      | ●       | ●                                 | ●       |
| Poland                | ●                            | ●                            | ●                 | ○       | ●                      | ●       | ●                                 | ○       |
| Portugal              | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ○       |
| Qatar                 | ●                            | ●                            | ○                 | ●       | ●                      | ●       | ●                                 | ●       |
| Russian Federation    | ○                            | ○                            | ●                 | ●       | ●                      | ●       | ●                                 | ●       |
| Saudi Arabia          | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ●                                 | ●       |
| Serbia                | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| Singapore             | ○                            | ○                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| Slovak Republic       | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ○                                 | ○       |
| Slovenia              | ○                            | ○                            | ●                 | ●       | ●                      | ●       | ●                                 | ●       |
| South Africa          | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ○       |
| Spain                 | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| Sweden                | ●                            | ●                            | ●                 | ●       | ●                      | ●       | ○                                 | ○       |
| Turkey                | ●                            | ●                            | ○                 | ○       | ●                      | ●       | ●                                 | ●       |
| United Arab Emirates  | ●                            | ●                            | ●                 | ○       | ●                      | ●       | ●                                 | ○       |
| United States         | Varies by state and district | Varies by state and district | ●                 | ●       | ●                      | ●       | ●                                 | ●       |

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

**Benchmarking Participants—Responses Pertain to Benchmarking Provinces/Emirates/States**

|                         |   |   |   |   |   |   |   |   |
|-------------------------|---|---|---|---|---|---|---|---|
| Buenos Aires, Argentina | ● | ● | ○ | ○ | ● | ● | ● | ○ |
| Ontario, Canada         | ○ | ○ | ○ | ○ | ● | ● | ● | ○ |
| Quebec, Canada          | ○ | ○ | ○ | ○ | ○ | ○ | ○ | ○ |
| Abu Dhabi, UAE          | ● | ● | ○ | ○ | ● | ● | ● | ● |
| Dubai, UAE              | ● | ● | ● | ○ | ● | ● | ● | ● |
| Florida, US             | ● | ● | ● | ● | ● | ● | ● | ● |

● Yes  
 ○ No