Appendix 4B: Summary Statistics and Standard Errors for Proficiency in Science at the Fourth Grade

Summary Statistics and Standard Errors for Proficiency in Overall Science at the Fourth Grade

Country	Sample Size	Overall Science				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Australia	6057	523.628	7.288	0.976	8.264	2.875
Bahrain	4146	458.812	4.238	2.273	6.511	2.552
Belgium (Flemish)	5404	511.508	4.281	0.991	5.272	2.296
Bulgaria	4228	535.704	34.479	0.602	35.082	5.923
Canada	12283	524.782	5.392	1.616	7.008	2.647
Chile	4756	477.710	5.487	1.998	7.485	2.736
Chinese Taipei	4291	555.282	2.666	0.534	3.200	1.789
Croatia	3985	533.442	3.082	1.136	4.218	2.054
Cyprus	4125	481.298	5.755	0.815	6.570	2.563
Czech Republic	5202	534.380	4.097	1.458	5.555	2.357
Denmark	3710	527.029	4.098	0.208	4.306	2.075
England	4006	535.825	5.349	0.519	5.868	2.422
Finland	5015	553.813	3.901	1.451	5.352	2.313
France	4873	487.401	6.580	0.890	7.470	2.733
Georgia	3919	451.245	11.977	2.034	14.010	3.743
Germany	3948	528.467	4.226	1.491	5.716	2.391
Hong Kong SAR	3600	556.547	7.958	0.654	8.612	2.935
Hungary	5036	541.978	10.113	1.056	11.169	3.342
Indonesia	4025	396.666	19.566	3.818	23.385	4.836
Iran, Islamic Rep. of	3823	421.009	14.192	1.978	16.170	4.021
Ireland	4344	528.876	4.841	0.704	5.545	2.355
Italy	4373	516.475	4.955	1.921	6.876	2.622
Japan	4383	569.013	2.515	0.633	3.147	1.774
Kazakhstan	4702	549.556	18.854	0.555	19.408	4.406
Korea, Rep. of	4669	589.320	2.547	1.379	3.926	1.981
Kuwait	3593	337.213	31.918	6.754	38.673	6.219
Lithuania	4529	527.667	4.796	1.497	6.293	2.509
Morocco	5068	352.207	18.127	3.626	21.753	4.664

Summary Statistics and Standard Errors for Proficiency in Overall Science at the Fourth Grade (Continued)

Country	Sample Size	Overall Science				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Netherlands	4515	517.120	4.484	2.550	7.035	2.652
New Zealand	6322	505.517	4.999	2.071	7.070	2.659
Northern Ireland	3116	519.768	4.421	0.562	4.983	2.232
Norway (5)	4329	537.598	5.276	1.736	7.012	2.648
Oman	9105	430.974	7.276	2.432	9.709	3.116
Poland	4747	547.190	3.995	1.842	5.838	2.416
Portugal	4693	508.056	2.168	2.675	4.843	2.201
Qatar	5194	436.258	15.259	1.275	16.534	4.066
Russian Federation	4921	567.196	8.992	1.178	10.170	3.189
Saudi Arabia	4337	390.329	19.728	4.629	24.357	4.935
Serbia	4036	524.509	11.993	1.609	13.602	3.688
Singapore	6517	590.478	12.749	0.944	13.693	3.700
Slovak Republic	5773	520.495	6.579	0.303	6.882	2.623
Slovenia	4445	542.573	4.132	1.824	5.956	2.441
Spain	7764	518.198	5.590	1.085	6.675	2.584
Sweden	4142	540.194	9.954	2.785	12.739	3.569
Turkey	6456	483.399	8.369	2.636	11.005	3.317
United Arab Emirates	21177	451.242	6.896	0.871	7.767	2.787
United States	10029	545.907	4.134	0.761	4.895	2.213
Benchmarking Participants						
Buenos Aires, Argentina	3104	417.835	13.566	8.083	21.649	4.653
Ontario, Canada	4574	530.370	4.419	2.060	6.480	2.545
Quebec, Canada	2798	524.509	14.884	1.856	16.740	4.091
Norway (4)	4164	493.003	4.262	0.456	4.717	2.172
Abu Dhabi, UAE	5001	414.711	30.060	1.035	31.096	5.576
Dubai, UAE	7453	517.936	2.708	0.368	3.076	1.754
Florida, US	2025	548.555	22.651	0.372	23.023	4.798

Summary Statistics and Standard Errors for Proficiency in Life Science at the Fourth Grade

Country	Sample Size	Life Science				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Australia	6057	531.143	8.195	1.095	9.291	3.048
Bahrain	4146	454.854	4.512	3.854	8.366	2.892
Belgium (Flemish)	5404	512.935	4.657	1.094	5.751	2.398
Bulgaria	4228	541.896	38.184	1.687	39.871	6.314
Canada	12283	535.654	5.603	2.240	7.843	2.801
Chile	4756	487.384	5.954	0.880	6.834	2.614
Chinese Taipei	4291	544.770	2.538	1.560	4.098	2.024
Croatia	3985	530.910	3.632	3.352	6.984	2.643
Cyprus	4125	480.827	6.248	1.771	8.020	2.832
Czech Republic	5202	538.053	3.598	0.597	4.195	2.048
Denmark	3710	534.224	3.410	2.521	5.931	2.435
England	4006	535.971	5.262	1.129	6.391	2.528
Finland	5015	555.849	4.092	2.636	6.729	2.594
France	4873	489.621	6.967	2.650	9.617	3.101
Georgia	3919	458.822	12.197	4.827	17.024	4.126
Germany	3948	527.937	3.786	0.322	4.108	2.027
Hong Kong SAR	3600	550.303	11.256	2.443	13.699	3.701
Hungary	5036	550.295	10.296	1.225	11.521	3.394
Indonesia	4025	386.792	20.415	5.631	26.046	5.104
Iran, Islamic Rep. of	3823	417.166	17.090	3.481	20.571	4.536
Ireland	4344	530.541	5.219	0.610	5.830	2.414
Italy	4373	519.045	5.993	1.248	7.240	2.691
Japan	4383	556.100	2.866	1.856	4.722	2.173
Kazakhstan	4702	544.921	16.613	0.543	17.156	4.142
Korea, Rep. of	4669	581.483	2.783	0.914	3.697	1.923
Kuwait	3593	331.391	36.354	7.136	43.490	6.595
Lithuania	4529	527.018	5.698	3.049	8.746	2.957
Morocco	5068	350.497	16.638	1.906	18.545	4.306
Netherlands	4515	525.290	4.721	2.593	7.314	2.704
New Zealand	6322	511.318	5.488	1.920	7.408	2.722
Northern Ireland	3116	521.251	5.785	1.341	7.125	2.669
Norway (5)	4329	545.871	5.289	1.244	6.534	2.556

Summary Statistics and Standard Errors for Proficiency in Life Science at the Fourth Grade (Continued)

Country	Sample Size	Life Science				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Oman	9105	426.230	7.772	2.695	10.466	3.235
Poland	4747	556.672	4.310	2.124	6.434	2.537
Portugal	4693	507.867	1.947	2.483	4.429	2.105
Qatar	5194	435.906	16.166	2.814	18.980	4.357
Russian Federation	4921	568.854	9.162	0.531	9.693	3.113
Saudi Arabia	4337	381.511	19.642	4.031	23.673	4.865
Serbia	4036	530.934	10.414	3.853	14.267	3.777
Singapore	6517	606.860	16.909	2.795	19.705	4.439
Slovak Republic	5773	517.451	6.540	2.128	8.668	2.944
Slovenia	4445	544.839	4.158	1.290	5.447	2.334
Spain	7764	522.877	4.949	2.021	6.970	2.640
Sweden	4142	539.708	9.463	1.585	11.048	3.324
Turkey	6456	472.466	7.690	3.447	11.138	3.337
United Arab Emirates	21177	449.061	7.190	3.653	10.842	3.293
United States	10029	555.412	4.171	0.999	5.170	2.274
Benchmarking Participants						
Buenos Aires, Argentina	3104	425.699	12.786	3.291	16.077	4.010
Ontario, Canada	4574	543.885	5.070	1.619	6.690	2.586
Quebec, Canada	2798	532.924	14.939	3.566	18.505	4.302
Norway (4)	4164	502.293	4.747	0.928	5.675	2.382
Abu Dhabi, UAE	5001	413.128	31.582	4.244	35.826	5.986
Dubai, UAE	7453	517.831	3.313	3.529	6.842	2.616
Florida, US	2025	558.311	25.028	1.283	26.311	5.129

Summary Statistics and Standard Errors for Proficiency in Physical Science at the Fourth Grade

Country	Sample Size	Physical Science				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Australia	6057	515.902	6.804	0.630	7.434	2.727
Bahrain	4146	464.861	5.810	4.634	10.444	3.232
Belgium (Flemish)	5404	505.943	4.365	5.846	10.211	3.195
Bulgaria	4228	529.444	38.458	4.402	42.859	6.547
Canada	12283	517.722	6.036	1.064	7.100	2.665
Chile	4756	466.022	6.930	1.257	8.187	2.861
Chinese Taipei	4291	568.490	2.596	1.212	3.809	1.952
Croatia	3985	535.403	3.593	4.757	8.350	2.890
Cyprus	4125	485.918	6.670	0.362	7.032	2.652
Czech Republic	5202	530.608	4.582	1.100	5.681	2.384
Denmark	3710	515.613	4.713	2.838	7.552	2.748
England	4006	539.948	5.121	2.312	7.433	2.726
Finland	5015	547.208	3.845	1.285	5.130	2.265
France	4873	481.723	6.191	1.038	7.230	2.689
Georgia	3919	437.794	17.228	4.747	21.974	4.688
Germany	3948	532.324	4.570	1.838	6.409	2.532
Hong Kong SAR	3600	554.683	7.980	4.173	12.153	3.486
Hungary	5036	533.663	11.028	1.535	12.563	3.544
Indonesia	4025	405.127	22.387	7.491	29.878	5.466
Iran, Islamic Rep. of	3823	423.346	17.813	7.339	25.151	5.015
Ireland	4344	523.949	4.951	3.061	8.013	2.831
Italy	4373	512.967	4.993	3.162	8.155	2.856
Japan	4383	587.004	2.251	4.536	6.787	2.605
Kazakhstan	4702	558.764	22.379	2.629	25.008	5.001
Korea, Rep. of	4669	597.496	2.549	1.605	4.154	2.038
Kuwait	3593	325.051	36.298	6.274	42.572	6.525
Lithuania	4529	535.089	5.012	1.298	6.309	2.512
Morocco	5068	356.866	20.419	14.175	34.594	5.882
Netherlands	4515	503.727	5.009	1.824	6.833	2.614
New Zealand	6322	497.224	5.451	1.005	6.456	2.541
Northern Ireland	3116	513.986	4.647	1.978	6.625	2.574
Norway (5)	4329	522.028	5.265	2.507	7.772	2.788

Summary Statistics and Standard Errors for Proficiency in Physical Science at the Fourth Grade (Continued)

Country	Sample Size	Physical Science				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Oman	9105	435.117	9.280	2.572	11.852	3.443
Poland	4747	539.830	4.245	0.053	4.298	2.073
Portugal	4693	501.828	2.310	6.167	8.476	2.911
Qatar	5194	435.436	16.540	5.577	22.117	4.703
Russian Federation	4921	567.376	9.830	3.255	13.085	3.617
Saudi Arabia	4337	389.818	23.414	7.260	30.674	5.538
Serbia	4036	528.800	11.906	2.212	14.118	3.757
Singapore	6517	603.304	13.591	0.448	14.039	3.747
Slovak Republic	5773	525.851	7.807	3.841	11.648	3.413
Slovenia	4445	546.182	4.446	1.166	5.612	2.369
Spain	7764	506.946	7.744	0.740	8.484	2.913
Sweden	4142	534.231	11.702	1.113	12.816	3.580
Turkey	6456	495.817	10.077	0.982	11.059	3.325
United Arab Emirates	21177	453.273	7.706	1.073	8.779	2.963
United States	10029	537.443	4.166	2.641	6.808	2.609
Benchmarking Participants						
Buenos Aires, Argentina	3104	413.222	13.104	2.017	15.120	3.889
Ontario, Canada	4574	521.987	4.711	1.753	6.464	2.542
Quebec, Canada	2798	519.492	17.643	6.035	23.679	4.866
Norway (4)	4164	474.873	5.356	2.254	7.610	2.759
Abu Dhabi, UAE	5001	412.939	32.962	2.198	35.160	5.930
Dubai, UAE	7453	520.530	2.517	2.423	4.940	2.223
Florida, US	2025	541.778	26.449	1.103	27.552	5.249

Summary Statistics and Standard Errors for Proficiency in Earth Science at the Fourth Grade

Country	Sample Size	Earth Science				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Australia	6057	519.888	8.899	2.119	11.018	3.319
Bahrain	4146	447.865	5.569	4.944	10.513	3.242
Belgium (Flemish)	5404	512.607	4.856	3.191	8.047	2.837
Bulgaria	4228	531.880	33.707	14.145	47.851	6.917
Canada	12283	512.850	6.630	2.862	9.491	3.081
Chile	4756	464.583	7.158	4.397	11.555	3.399
Chinese Taipei	4291	555.247	3.104	3.382	6.486	2.547
Croatia	3985	535.142	5.184	6.708	11.892	3.448
Cyprus	4125	462.731	8.610	3.587	12.197	3.492
Czech Republic	5202	531.418	6.092	2.852	8.944	2.991
Denmark	3710	530.527	4.867	4.117	8.984	2.997
England	4006	527.412	7.177	3.686	10.864	3.296
Finland	5015	560.232	4.577	2.340	6.917	2.630
France	4873	484.530	9.890	11.804	21.695	4.658
Georgia	3919	440.920	15.537	3.297	18.834	4.340
Germany	3948	518.851	5.799	10.043	15.842	3.980
Hong Kong SAR	3600	574.460	9.062	0.549	9.611	3.100
Hungary	5036	535.214	14.005	1.757	15.762	3.970
Indonesia	4025	383.565	17.661	14.026	31.688	5.629
Iran, Islamic Rep. of	3823	408.046	18.478	4.397	22.874	4.783
Ireland	4344	534.592	5.760	3.479	9.239	3.040
Italy	4373	510.286	8.669	3.701	12.370	3.517
Japan	4383	562.742	4.487	1.856	6.342	2.518
Kazakhstan	4702	541.894	22.305	6.477	28.782	5.365
Korea, Rep. of	4669	590.735	4.940	11.919	16.859	4.106
Kuwait	3593	333.047	26.362	14.028	40.390	6.355
Lithuania	4529	515.383	6.037	7.545	13.581	3.685
Morocco	5068	289.251	28.351	15.527	43.878	6.624
Netherlands	4515	520.226	6.698	2.172	8.870	2.978
New Zealand	6322	505.711	6.827	4.465	11.292	3.360
Northern Ireland	3116	521.971	7.290	1.654	8.944	2.991
Norway (5)	4329	549.166	8.619	5.732	14.351	3.788
Oman	9105	423.144	8.319	4.145	12.465	3.531
Poland	4747	540.431	5.435	1.444	6.879	2.623

Summary Statistics and Standard Errors for Proficiency in Earth Science at the Fourth Grade (Continued)

Country	Sample Size	Earth Science				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Portugal	4693	512.810	4.505	1.862	6.367	2.523
Qatar	5194	426.902	16.688	8.725	25.413	5.041
Russian Federation	4921	562.188	10.257	11.547	21.805	4.670
Saudi Arabia	4337	394.638	20.793	2.031	22.824	4.777
Serbia	4036	495.704	17.192	5.985	23.177	4.814
Singapore	6517	546.409	11.399	2.272	13.670	3.697
Slovak Republic	5773	513.703	7.995	0.753	8.748	2.958
Slovenia	4445	530.660	5.178	11.305	16.483	4.060
Spain	7764	519.759	6.248	2.992	9.240	3.040
Sweden	4142	551.752	13.803	3.180	16.983	4.121
Turkey	6456	479.811	10.043	0.690	10.732	3.276
United Arab Emirates	21177	447.864	7.760	4.146	11.905	3.450
United States	10029	539.282	5.420	0.292	5.712	2.390
Benchmarking Participants						
Buenos Aires, Argentina	3104	390.719	16.845	15.791	32.636	5.713
Ontario, Canada	4574	514.845	6.255	7.132	13.386	3.659
Quebec, Canada	2798	515.031	17.944	1.191	19.136	4.374
Norway (4)	4164	497.894	5.913	7.553	13.467	3.670
Abu Dhabi, UAE	5001	407.997	33.798	13.519	47.317	6.879
Dubai, UAE	7453	510.420	2.476	5.875	8.351	2.890
Florida, US	2025	538.811	31.389	11.287	42.676	6.533

Summary Statistics and Standard Errors for Proficiency in Science Knowing at the Fourth Grade

Country	Sample Size	Science Knowing				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Australia	6057	522.769	8.763	2.158	10.922	3.305
Bahrain	4146	455.649	4.405	2.016	6.421	2.534
Belgium (Flemish)	5404	497.788	5.324	1.806	7.130	2.670
Bulgaria	4228	551.172	38.037	3.978	42.015	6.482
Canada	12283	522.576	5.654	4.088	9.742	3.121
Chile	4756	477.489	6.975	3.016	9.991	3.161
Chinese Taipei	4291	556.940	2.778	3.674	6.452	2.540
Croatia	3985	534.274	4.162	4.264	8.426	2.903
Cyprus	4125	467.490	5.558	4.599	10.157	3.187
Czech Republic	5202	544.539	4.102	5.110	9.213	3.035
Denmark	3710	524.043	3.918	3.006	6.924	2.631
England	4006	533.319	5.849	0.825	6.674	2.583
Finland	5015	555.944	5.027	4.439	9.466	3.077
France	4873	481.674	7.771	6.360	14.131	3.759
Georgia	3919	459.739	11.875	6.086	17.962	4.238
Germany	3948	527.430	5.592	2.518	8.110	2.848
Hong Kong SAR	3600	561.659	7.955	1.071	9.026	3.004
Hungary	5036	550.431	12.488	1.616	14.104	3.756
Indonesia	4025	397.426	21.475	2.078	23.553	4.853
Iran, Islamic Rep. of	3823	416.473	15.224	1.861	17.085	4.133
Ireland	4344	528.730	5.401	1.081	6.481	2.546
Italy	4373	520.605	5.980	3.765	9.744	3.122
Japan	4383	543.657	3.322	1.950	5.272	2.296
Kazakhstan	4702	550.595	19.865	4.929	24.794	4.979
Korea, Rep. of	4669	581.781	3.141	1.778	4.918	2.218
Kuwait	3593	343.421	31.410	9.347	40.757	6.384
Lithuania	4529	523.701	5.377	3.643	9.020	3.003
Morocco	5068	331.292	25.336	5.893	31.229	5.588
Netherlands	4515	508.459	5.184	0.542	5.726	2.393
New Zealand	6322	503.800	6.036	1.872	7.908	2.812
Northern Ireland	3116	518.335	5.212	3.283	8.496	2.915
Norway (5)	4329	532.526	5.989	2.948	8.937	2.989

Summary Statistics and Standard Errors for Proficiency in Science Knowing at the Fourth Grade (Continued)

Country	Sample Size	Science Knowing				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Oman	9105	421.587	8.956	1.562	10.518	3.243
Poland	4747	543.641	4.964	1.522	6.486	2.547
Portugal	4693	506.644	2.554	5.719	8.274	2.876
Qatar	5194	436.984	15.048	5.137	20.185	4.493
Russian Federation	4921	568.536	12.031	3.301	15.332	3.916
Saudi Arabia	4337	394.110	23.780	4.791	28.571	5.345
Serbia	4036	526.584	13.299	1.539	14.838	3.852
Singapore	6517	574.203	14.799	2.303	17.101	4.135
Slovak Republic	5773	529.604	8.353	2.533	10.885	3.299
Slovenia	4445	540.865	5.117	1.603	6.720	2.592
Spain	7764	522.242	7.003	3.856	10.859	3.295
Sweden	4142	538.420	9.647	4.427	14.074	3.752
Turkey	6456	477.707	7.926	0.807	8.733	2.955
United Arab Emirates	21177	453.267	8.926	1.944	10.870	3.297
United States	10029	548.331	5.299	0.844	6.143	2.479
Benchmarking Participants						
Buenos Aires, Argentina	3104	416.900	14.280	5.172	19.452	4.410
Ontario, Canada	4574	527.371	4.819	3.193	8.012	2.831
Quebec, Canada	2798	523.883	15.566	2.648	18.214	4.268
Norway (4)	4164	494.759	5.113	4.167	9.279	3.046
Abu Dhabi, UAE	5001	410.310	38.377	4.649	43.026	6.559
Dubai, UAE	7453	522.599	3.476	1.997	5.473	2.339
Florida, US	2025	553.462	28.309	4.674	32.983	5.743

Summary Statistics and Standard Errors for Proficiency in Science Applying at the Fourth Grade

Country	Sample Size	Science Applying				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Australia	6057	522.276	7.226	0.207	7.433	2.726
Bahrain	4146	461.682	4.224	4.986	9.210	3.035
Belgium (Flemish)	5404	513.250	4.088	2.085	6.173	2.484
Bulgaria	4228	536.175	36.807	1.212	38.019	6.166
Canada	12283	527.648	5.834	0.718	6.552	2.560
Chile	4756	475.640	6.612	2.258	8.870	2.978
Chinese Taipei	4291	553.311	2.713	4.081	6.794	2.607
Croatia	3985	530.205	2.983	2.029	5.012	2.239
Cyprus	4125	488.924	6.395	4.988	11.383	3.374
Czech Republic	5202	528.242	4.402	0.219	4.621	2.150
Denmark	3710	529.189	4.516	1.153	5.669	2.381
England	4006	537.690	4.900	2.151	7.051	2.655
Finland	5015	552.840	4.064	1.607	5.672	2.382
France	4873	493.612	7.592	2.226	9.818	3.133
Georgia	3919	449.466	16.533	6.388	22.921	4.788
Germany	3948	528.765	4.406	1.372	5.778	2.404
Hong Kong SAR	3600	553.844	8.470	2.361	10.830	3.291
Hungary	5036	538.723	10.722	1.067	11.789	3.433
Indonesia	4025	391.567	17.217	10.551	27.768	5.270
Iran, Islamic Rep. of	3823	417.371	16.121	3.738	19.859	4.456
Ireland	4344	530.001	4.846	1.303	6.150	2.480
Italy	4373	513.396	5.862	3.838	9.700	3.114
Japan	4383	576.417	2.797	0.489	3.286	1.813
Kazakhstan	4702	546.956	19.056	2.529	21.585	4.646
Korea, Rep. of	4669	593.732	2.690	0.969	3.659	1.913
Kuwait	3593	324.108	36.201	16.438	52.640	7.255
Lithuania	4529	526.262	4.750	0.885	5.636	2.374
Morocco	5068	357.372	17.111	5.340	22.451	4.738
Netherlands	4515	518.865	4.356	1.555	5.911	2.431
New Zealand	6322	502.185	5.641	3.795	9.436	3.072
Northern Ireland	3116	518.628	4.959	3.256	8.216	2.866
Norway (5)	4329	541.578	5.879	2.568	8.447	2.906

Summary Statistics and Standard Errors for Proficiency in Science Applying at the Fourth Grade (Continued)

Country	Sample Size	Science Applying				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Oman	9105	434.518	8.362	0.251	8.613	2.935
Poland	4747	554.100	4.059	3.643	7.702	2.775
Portugal	4693	508.312	2.688	0.861	3.550	1.884
Qatar	5194	430.333	16.965	4.687	21.652	4.653
Russian Federation	4921	568.380	8.576	2.109	10.685	3.269
Saudi Arabia	4337	387.652	20.328	1.637	21.965	4.687
Serbia	4036	521.795	14.031	5.873	19.903	4.461
Singapore	6517	599.080	14.060	1.919	15.979	3.997
Slovak Republic	5773	516.779	7.135	0.726	7.860	2.804
Slovenia	4445	546.046	5.124	3.005	8.129	2.851
Spain	7764	513.701	5.846	4.875	10.721	3.274
Sweden	4142	540.114	11.624	0.241	11.864	3.444
Turkey	6456	485.988	9.066	0.543	9.609	3.100
United Arab Emirates	21177	451.909	7.206	2.916	10.122	3.181
United States	10029	546.290	4.290	0.497	4.787	2.188
Benchmarking Participants						
Buenos Aires, Argentina	3104	416.424	13.836	7.316	21.152	4.599
Ontario, Canada	4574	534.352	4.948	1.130	6.079	2.466
Quebec, Canada	2798	525.340	17.300	2.808	20.108	4.484
Norway (4)	4164	494.057	5.164	0.775	5.940	2.437
Abu Dhabi, UAE	5001	416.710	30.147	4.551	34.698	5.891
Dubai, UAE	7453	517.381	2.638	5.029	7.667	2.769
Florida, US	2025	549.525	22.541	1.247	23.788	4.877

Summary Statistics and Standard Errors for Proficiency in Science Reasoning at the Fourth Grade

Country	Sample Size	Science Reasoning				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Australia	6057	527.452	7.646	1.300	8.945	2.991
Bahrain	4146	455.186	4.336	4.637	8.973	2.995
Belgium (Flemish)	5404	525.755	4.903	3.462	8.364	2.892
Bulgaria	4228	506.718	39.583	1.150	40.733	6.382
Canada	12283	524.497	4.751	2.188	6.939	2.634
Chile	4756	476.894	4.798	1.635	6.432	2.536
Chinese Taipei	4291	557.882	3.957	5.673	9.630	3.103
Croatia	3985	535.684	3.376	2.617	5.993	2.448
Cyprus	4125	489.644	5.705	7.553	13.257	3.641
Czech Republic	5202	528.733	4.701	1.161	5.862	2.421
Denmark	3710	525.659	4.025	4.325	8.350	2.890
England	4006	538.615	5.145	2.287	7.432	2.726
Finland	5015	552.053	3.693	1.761	5.455	2.336
France	4873	481.178	6.237	1.527	7.764	2.786
Georgia	3919	425.614	14.835	1.161	15.996	3.999
Germany	3948	531.637	3.855	1.487	5.342	2.311
Hong Kong SAR	3600	552.253	12.313	4.102	16.415	4.052
Hungary	5036	532.736	10.248	5.147	15.395	3.924
Indonesia	4025	389.562	27.506	2.849	30.355	5.510
Iran, Islamic Rep. of	3823	422.020	19.077	4.974	24.051	4.904
Ireland	4344	525.845	5.604	3.013	8.617	2.936
Italy	4373	511.235	4.652	7.858	12.509	3.537
Japan	4383	594.389	2.009	1.279	3.288	1.813
Kazakhstan	4702	551.564	19.351	1.029	20.380	4.514
Korea, Rep. of	4669	594.102	2.718	2.183	4.901	2.214
Kuwait	3593	296.992	42.526	22.316	64.842	8.052
Lithuania	4529	537.877	6.044	2.830	8.874	2.979
Morocco	5068	353.794	16.272	6.187	22.459	4.739
Netherlands	4515	525.802	4.234	4.024	8.258	2.874
New Zealand	6322	513.774	4.910	0.773	5.684	2.384
Northern Ireland	3116	519.911	5.248	1.379	6.627	2.574
Norway (5)	4329	536.620	4.748	9.569	14.317	3.784

Summary Statistics and Standard Errors for Proficiency in Science Reasoning at the Fourth Grade (Continued)

Country	Sample Size	Science Reasoning				
		Mean Proficiency	Jackknife Sampling Variance	Imputation Variance	Total Variance	Overall Standard Error
Oman	9105	431.034	6.684	2.501	9.185	3.031
Poland	4747	542.020	4.231	6.143	10.374	3.221
Portugal	4693	505.642	2.578	1.087	3.664	1.914
Qatar	5194	433.193	15.679	3.786	19.465	4.412
Russian Federation	4921	560.506	9.429	4.647	14.075	3.752
Saudi Arabia	4337	364.906	21.501	8.013	29.514	5.433
Serbia	4036	520.594	11.389	4.012	15.402	3.924
Singapore	6517	605.115	10.618	2.477	13.095	3.619
Slovak Republic	5773	507.314	6.605	4.620	11.226	3.350
Slovenia	4445	538.302	3.549	3.745	7.295	2.701
Spain	7764	516.646	5.379	1.585	6.964	2.639
Sweden	4142	542.115	9.473	4.929	14.402	3.795
Turkey	6456	483.324	10.555	0.423	10.977	3.313
United Arab Emirates	21177	444.321	5.940	2.950	8.890	2.982
United States	10029	541.636	3.481	3.961	7.442	2.728
Benchmarking Participants						
Buenos Aires, Argentina	3104	416.191	13.192	12.177	25.369	5.037
Ontario, Canada	4574	528.998	4.161	3.401	7.563	2.750
Quebec, Canada	2798	526.174	12.937	7.878	20.815	4.562
Norway (4)	4164	482.447	6.069	4.397	10.467	3.235
Abu Dhabi, UAE	5001	411.754	25.664	2.854	28.518	5.340
Dubai, UAE	7453	510.072	2.608	5.593	8.201	2.864
Florida, US	2025	540.575	23.390	10.295	33.685	5.804