

Science: Biology / Applying

B_SD1_01 SE72002: Unusual characteristics of echidna - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	51.6	30.4	9.5	7.6	50.7	1.8	0.0	48.4	54.8
	2023	648	50.2	25.0	12.3	11.2	48.9	2.2	0.3	52.4	47.8
Chinese Taipei	2019	723	57.1	27.4	6.5	8.9	57.0	0.1	0.2	59.0	55.4
	2023	1102	63.1	23.7	6.1	7.1	63.0	0.0	0.1	64.4	61.8
England	2019	480	65.0	18.8	7.0	8.5	63.9	1.7	0.0	63.2	66.9
	2023	601	67.0	14.3	6.9	11.1	65.4	1.1	1.2	65.6	68.5
Finland	2019	701	74.4	12.6	6.6	6.1	73.7	0.7	0.2	78.8	70.0
	2023	858	67.4	15.9	7.4	9.0	66.7	0.7	0.2	74.3	61.2
France	2019	558	68.5	14.6	6.9	9.8	68.0	0.7	0.0	72.7	64.4
	2023	651	69.7	10.4	10.0	9.8	69.4	0.4	0.0	72.9	66.5
Georgia	2019	468	55.7	20.4	14.3	9.2	55.2	1.0	0.0	57.7	53.8
	2023	708	58.2	22.0	11.0	8.7	58.0	0.3	0.0	59.0	57.4
Hong Kong SAR	2019	468	55.7	14.1	11.2	18.5	55.1	0.5	0.5	52.9	57.9
	2023	645	71.8	10.6	8.8	8.2	70.3	1.4	0.7	70.1	73.4
Hungary	2019	655	76.8	8.8	6.1	8.1	76.3	0.7	0.0	74.9	78.5
	2023	798	71.9	10.0	7.3	10.9	71.9	0.0	0.0	74.7	69.2
Israel	2019	529	61.5	19.3	7.5	11.7	61.4	0.2	0.0	57.3	65.4
	2023	760	55.6	17.8	12.5	13.7	55.1	0.4	0.5	56.4	54.8
Italy	2019	514	71.6	15.1	7.0	6.2	71.4	0.3	0.0	69.5	73.6
	2023	670	67.1	18.2	7.8	6.9	66.8	0.1	0.2	67.5	66.6
Korea, Rep. of	2019	548	76.8	8.2	8.6	6.3	76.6	0.3	0.0	76.9	76.8
	2023	849	81.0	7.5	6.4	5.0	80.6	0.4	0.1	81.7	80.4
Lithuania	2019	546	74.0	15.1	6.2	4.7	74.0	0.0	0.0	73.9	74.0
	2023	790	68.5	14.7	8.2	8.6	68.3	0.2	0.0	70.2	66.6
Malaysia	2019	1014	36.4	18.8	16.4	28.4	36.4	0.0	0.0	36.1	36.7
	2023	1275	31.0	20.1	15.2	33.6	31.0	0.0	0.2	29.2	33.0
Norway (9)	2019	644	70.2	13.7	7.2	8.7	69.5	0.6	0.3	72.6	67.7
	2023	908	63.4	17.3	9.2	9.4	62.0	0.5	1.6	66.2	60.7
Portugal	2019	476	72.7	13.8	5.0	8.3	72.4	0.4	0.0	71.2	74.2
	2023	774	66.8	18.4	6.2	8.7	66.8	0.0	0.0	69.3	64.4
Qatar	2019	551	49.1	21.0	15.2	14.1	48.5	1.1	0.0	52.0	46.2
	2023	618	50.2	18.7	16.7	13.8	49.5	0.5	0.7	50.0	50.3
Singapore	2019	688	83.7	6.5	5.1	4.7	83.3	0.4	0.0	81.9	85.5
	2023	948	81.0	7.9	6.1	4.9	80.9	0.0	0.2	83.0	79.3
Sweden	2019	565	66.9	16.9	8.2	7.6	66.1	1.2	0.0	63.5	69.8
	2023	725	65.3	18.0	5.9	10.3	64.5	1.0	0.3	66.2	64.5
United Arab Emirates	2019	3201	55.3	17.3	15.0	12.0	54.9	0.8	0.1	58.8	52.1
	2023	4045	60.1	16.2	12.2	11.2	59.7	0.3	0.4	61.8	58.5
United States	2019	1231	69.3	12.8	10.3	7.0	68.1	0.5	1.2	71.4	67.3
	2023	1168	67.6	14.1	10.6	7.1	66.5	0.3	1.4	67.8	67.4
International Avg. (20)	2019	15155	64.6	16.3	9.0	9.8	64.1	0.7	0.1	64.6	64.6
	2023	19541	63.8	16.0	9.3	10.5	63.3	0.5	0.4	65.1	62.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SD1_01 SE72002: Unusual characteristics of echidna - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	45.2	20.3	18.0	15.8	44.7	0.9	0.3	48.1	42.8
	2023	1036	49.0	18.9	16.6	15.2	48.7	0.3	0.3	52.0	46.2
Dubai, UAE	2019	827	70.0	12.8	9.9	7.2	69.9	0.1	0.0	73.9	65.9
	2023	1178	73.6	13.0	6.9	6.4	73.2	0.1	0.3	74.1	73.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SD1_02 SE72403: Classifying animals into groups (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	50.2	49.4	49.7	0.7	0.1	47.3	53.1
	2023	648	41.8	57.2	41.2	0.8	0.7	46.3	37.1
Chinese Taipei	2019	723	76.5	23.4	76.3	0.1	0.2	78.7	74.5
	2023	1102	68.5	31.5	68.4	0.0	0.1	67.8	69.2
England	2019	480	53.7	46.1	53.4	0.5	0.0	51.1	56.2
	2023	601	47.1	51.2	45.6	1.9	1.3	41.4	53.7
Finland	2019	701	58.6	41.2	58.3	0.1	0.4	59.4	57.8
	2023	858	42.1	57.6	41.8	0.3	0.3	43.4	41.0
France	2019	558	59.6	40.1	59.3	0.6	0.0	61.9	57.4
	2023	651	56.3	43.7	56.2	0.1	0.0	58.6	54.0
Georgia	2019	468	63.9	35.6	63.0	1.4	0.0	60.3	67.5
	2023	708	58.7	41.0	58.3	0.7	0.0	57.8	59.7
Hong Kong SAR	2019	468	46.8	52.6	46.3	0.6	0.5	43.5	49.5
	2023	645	56.5	42.9	55.9	0.5	0.7	55.6	57.4
Hungary	2019	655	61.1	38.8	60.9	0.3	0.0	57.8	64.1
	2023	798	59.0	41.0	59.0	0.0	0.0	56.2	61.6
Israel	2019	529	66.8	33.2	66.6	0.2	0.0	65.9	67.5
	2023	760	57.9	41.8	57.5	0.2	0.5	56.5	59.2
Italy	2019	514	67.8	32.1	67.6	0.2	0.0	63.4	71.9
	2023	670	59.0	40.9	58.8	0.1	0.2	58.0	59.9
Korea, Rep. of	2019	548	34.4	65.5	34.3	0.2	0.0	33.9	34.8
	2023	849	33.9	65.8	33.8	0.3	0.1	33.8	34.0
Lithuania	2019	546	40.5	59.3	40.4	0.3	0.0	36.2	44.1
	2023	790	32.5	67.5	32.5	0.0	0.0	31.5	33.7
Malaysia	2019	1014	31.9	68.1	31.9	0.0	0.0	30.4	33.4
	2023	1275	26.5	73.2	26.4	0.2	0.2	25.5	27.6
Norway (9)	2019	644	54.4	44.9	53.4	1.4	0.3	53.5	54.7
	2023	908	47.4	51.5	46.4	0.4	1.7	50.0	45.0
Portugal	2019	476	53.0	46.6	52.5	0.9	0.0	48.9	56.9
	2023	774	54.2	45.8	54.2	0.0	0.0	52.6	55.7
Qatar	2019	551	42.8	56.4	42.2	1.4	0.0	43.1	42.6
	2023	618	38.9	60.2	38.4	0.7	0.7	36.8	40.9
Singapore	2019	688	76.4	23.6	76.4	0.0	0.0	76.9	76.0
	2023	948	73.3	26.7	73.2	0.0	0.2	71.3	75.0
Sweden	2019	565	50.9	48.9	50.6	0.5	0.0	54.7	47.7
	2023	724	43.3	55.9	42.6	1.3	0.3	40.5	45.7
United Arab Emirates	2019	3203	44.3	55.3	44.0	0.6	0.1	44.3	44.3
	2023	4045	45.0	54.5	44.6	0.5	0.4	42.5	47.4
United States	2019	1231	52.1	47.0	51.1	0.6	1.2	51.8	52.3
	2023	1168	47.1	51.9	46.2	0.3	1.5	47.0	47.2
International Avg. (20)	2019	15157	54.3	45.4	53.9	0.5	0.1	53.2	55.3
	2023	19540	49.5	50.1	49.0	0.4	0.5	48.6	50.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SD1_02 SE72403: Classifying animals into groups (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	34.8	64.4	34.4	0.9	0.3	33.9	35.5
	2023	1036	34.1	65.0	33.6	1.1	0.3	31.5	36.5
Dubai, UAE	2019	827	57.1	42.7	56.8	0.5	0.0	59.7	54.4
	2023	1178	56.4	43.4	56.1	0.2	0.3	51.6	60.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing
B_SD1_03 SE72021: Origin of new cells as organisms grow - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	55.0	18.4	53.9	18.4	7.2	2.1	0.1	56.2	53.7
	2023	648	45.5	24.4	43.6	19.6	8.3	3.3	0.7	49.1	41.6
Chinese Taipei	2019	723	85.6	4.9	85.0	7.5	1.9	0.5	0.2	88.1	83.3
	2023	1102	82.6	6.5	82.5	8.1	2.7	0.0	0.1	84.2	81.3
England	2019	480	65.8	13.3	64.0	14.9	5.0	2.8	0.0	65.3	66.3
	2023	601	63.8	15.7	62.0	13.8	5.7	1.0	1.8	64.5	62.9
Finland	2019	701	68.2	12.8	67.5	12.1	6.5	0.7	0.4	71.4	65.0
	2023	858	58.2	16.4	57.2	17.2	7.5	1.4	0.3	64.6	52.5
France	2019	558	61.1	20.8	60.1	12.8	4.7	1.7	0.0	63.1	59.1
	2023	651	52.3	22.1	51.8	16.5	8.7	0.8	0.0	55.7	49.0
Georgia	2019	468	42.9	26.7	40.8	21.8	5.7	5.0	0.0	42.9	42.9
	2023	708	40.6	27.6	40.0	24.5	6.5	1.3	0.1	37.3	43.9
Hong Kong SAR	2019	468	63.1	7.7	61.8	20.1	8.3	1.3	0.8	66.2	60.6
	2023	645	67.2	10.9	66.5	15.9	5.7	0.4	0.7	63.5	70.7
Hungary	2019	655	72.5	7.3	72.1	15.6	4.4	0.5	0.0	76.7	68.6
	2023	798	65.1	6.1	65.1	21.4	7.4	0.0	0.0	65.3	64.8
Israel	2019	529	52.4	21.1	52.0	21.0	5.1	0.7	0.0	54.2	50.7
	2023	760	47.4	20.2	46.7	22.8	8.9	0.8	0.6	43.6	51.0
Italy	2019	514	67.0	14.5	65.7	14.7	3.2	1.9	0.0	69.6	64.6
	2023	670	61.0	16.2	60.5	17.0	5.4	0.7	0.2	59.7	62.1
Korea, Rep. of	2019	548	62.3	15.7	61.8	13.0	8.7	0.7	0.0	54.3	69.3
	2023	849	59.3	15.6	59.0	16.7	8.3	0.2	0.1	55.6	62.8
Lithuania	2019	546	65.9	18.4	65.3	8.4	6.9	1.0	0.0	69.9	62.6
	2023	790	56.6	17.8	56.5	17.0	8.4	0.3	0.0	55.7	57.6
Malaysia	2019	1014	30.4	24.5	30.3	30.4	14.5	0.3	0.0	29.5	31.3
	2023	1275	30.7	25.4	30.5	29.9	13.8	0.2	0.2	27.2	34.4
Norway (9)	2019	644	62.2	16.2	59.5	10.8	9.1	4.1	0.3	62.5	62.6
	2023	908	52.7	20.7	50.9	17.3	7.6	1.7	1.8	52.2	53.2
Portugal	2019	476	47.2	24.2	46.9	21.6	6.5	0.7	0.0	47.3	47.2
	2023	774	44.1	21.2	44.0	28.2	6.4	0.3	0.0	43.5	44.6
Qatar	2019	551	41.7	30.2	41.4	15.9	12.0	0.5	0.0	36.9	46.2
	2023	618	43.4	25.8	42.8	19.0	11.1	0.3	1.0	43.8	43.0
Singapore	2019	688	81.7	7.6	81.4	7.8	2.7	0.4	0.0	82.6	80.8
	2023	948	75.2	10.0	75.0	11.2	3.5	0.1	0.2	74.7	75.7
Sweden	2019	565	67.3	15.2	66.0	8.2	8.6	1.9	0.0	66.6	67.9
	2023	725	59.3	17.9	57.8	11.6	10.3	2.1	0.4	62.2	56.6
United Arab Emirates	2019	3202	57.5	16.8	56.8	15.4	9.7	1.1	0.2	58.5	56.5
	2023	4045	56.4	17.8	55.8	15.1	10.3	0.6	0.5	55.8	56.9
United States	2019	1231	61.7	15.6	60.5	17.0	5.0	0.6	1.3	63.3	60.1
	2023	1168	57.7	18.5	56.7	16.8	6.3	0.0	1.7	59.2	56.3
International Avg. (20)	2019	15156	60.6	16.6	59.6	15.4	6.8	1.4	0.2	61.3	60.0
	2023	19541	55.9	17.8	55.2	18.0	7.6	0.8	0.5	55.9	56.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing

B_SD1_03 SE72021: Origin of new cells as organisms grow - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	45.9	15.1	45.5	22.7	15.6	0.7	0.3	46.6	45.3
	2023	1036	45.2	16.4	44.7	19.3	18.4	0.7	0.5	43.4	46.9
Dubai, UAE	2019	827	71.2	12.8	70.5	10.5	5.2	0.8	0.1	73.1	69.3
	2023	1178	65.7	15.2	65.0	13.1	5.7	0.7	0.4	66.1	65.3

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Science: Biology / Applying
B_SD1_04 SE72082: How fewer vehicles affects air quality - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	50.0	49.1	49.0	1.6	0.3	51.8	47.9
	2023	648	43.5	53.3	41.1	4.5	1.0	45.0	42.0
Chinese Taipei	2019	723	62.5	37.3	62.3	0.3	0.2	67.0	58.4
	2023	1102	42.4	57.5	42.4	0.0	0.1	46.7	38.5
England	2019	480	42.2	56.7	41.4	1.7	0.2	48.1	36.5
	2023	601	54.9	43.6	53.2	1.4	1.8	53.3	56.7
Finland	2019	701	66.2	33.6	65.9	0.1	0.4	70.4	62.1
	2023	858	49.4	49.9	48.8	0.9	0.5	52.2	47.0
France	2019	558	54.1	45.3	53.3	1.4	0.0	57.5	50.9
	2023	651	49.5	50.3	49.3	0.4	0.0	50.1	49.0
Georgia	2019	467	44.2	53.2	42.2	4.6	0.0	47.2	41.3
	2023	708	29.5	68.1	28.5	3.0	0.5	29.2	29.8
Hong Kong SAR	2019	468	54.8	44.4	53.8	1.0	0.8	59.1	51.4
	2023	645	46.5	52.1	45.3	2.0	0.7	51.0	42.4
Hungary	2019	655	68.2	31.7	68.0	0.4	0.0	65.9	70.5
	2023	798	54.0	45.9	54.0	0.1	0.0	55.7	52.5
Israel	2019	529	69.1	30.7	68.6	0.7	0.0	72.8	65.5
	2023	760	51.5	47.5	50.5	1.3	0.8	51.8	51.3
Italy	2019	514	70.0	29.6	69.1	1.3	0.0	72.6	67.6
	2023	670	41.9	57.4	41.3	1.1	0.2	39.8	43.6
Korea, Rep. of	2019	548	50.7	49.2	50.5	0.4	0.0	50.8	50.5
	2023	849	59.9	39.9	59.7	0.3	0.2	61.7	58.3
Lithuania	2019	546	57.0	42.8	56.7	0.5	0.0	60.3	54.4
	2023	790	63.0	37.0	63.0	0.0	0.0	64.2	61.7
Malaysia	2019	1014	32.9	66.9	32.9	0.2	0.0	32.7	33.1
	2023	1275	27.4	72.0	27.2	0.4	0.4	30.1	24.5
Norway (9)	2019	644	44.9	53.7	43.7	2.2	0.4	42.1	46.8
	2023	908	46.7	51.2	44.9	1.9	1.9	47.6	45.9
Portugal	2019	476	75.1	24.8	74.9	0.3	0.0	74.4	75.8
	2023	774	71.1	28.9	71.0	0.2	0.0	73.0	69.2
Qatar	2019	551	39.1	59.8	38.3	1.9	0.0	46.4	32.0
	2023	618	52.8	46.1	51.5	1.4	1.0	54.9	50.9
Singapore	2019	688	66.0	33.9	65.8	0.3	0.0	68.1	63.8
	2023	948	44.0	55.9	43.8	0.1	0.2	42.4	45.4
United Arab Emirates	2019	3203	36.1	63.1	35.7	1.0	0.2	39.4	33.1
	2023	4043	21.5	77.1	21.2	1.1	0.7	22.7	20.4
United States	2019	1231	59.0	40.1	57.8	0.8	1.3	64.0	54.3
	2023	1168	58.2	40.7	56.7	0.9	1.7	60.8	55.8
International Avg. (19)	2019	14591	54.9	44.5	54.2	1.1	0.2	57.4	52.4
	2023	18814	47.8	51.3	47.0	1.1	0.6	49.1	46.6
Abu Dhabi, UAE	2019	1171	23.8	74.9	23.4	1.4	0.3	25.7	22.0
	2023	1034	16.1	82.3	15.8	1.1	0.7	18.3	14.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SD1_04 SE72082: How fewer vehicles affects air quality - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Dubai, UAE	2019	827	54.5	45.3	54.3	0.2	0.1	58.6	50.3
	2023	1178	26.4	72.8	26.1	0.5	0.6	28.1	24.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SD1_05 SE72066: Identify predators in diagram - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	50.8	24.1	17.8	50.3	6.7	0.9	0.3	45.3	56.7
	2023	648	42.6	24.9	23.8	42.0	7.8	0.5	1.0	40.5	44.9
Chinese Taipei	2019	723	70.9	5.1	22.5	70.5	1.4	0.3	0.2	71.2	70.7
	2023	1102	69.6	7.2	20.5	69.5	2.7	0.0	0.1	70.6	68.7
England	2019	480	52.8	20.2	15.0	51.6	10.9	2.0	0.2	50.0	55.5
	2023	601	48.8	25.3	15.6	47.6	9.0	0.7	1.8	48.0	49.8
Finland	2019	701	59.3	17.6	18.8	58.5	3.7	0.9	0.4	60.9	57.7
	2023	858	47.5	25.6	18.9	46.8	7.2	0.9	0.5	47.2	47.8
France	2019	558	54.6	22.0	15.9	54.1	7.1	0.9	0.0	51.6	57.4
	2023	651	51.6	21.3	19.0	51.4	7.9	0.4	0.0	49.6	53.5
Georgia	2019	468	22.7	26.1	40.3	22.6	10.4	0.6	0.0	20.0	25.4
	2023	708	29.5	28.2	31.6	29.2	9.8	0.5	0.7	31.3	27.8
Hong Kong SAR	2019	468	42.0	23.3	29.6	41.4	4.2	0.7	0.8	39.7	43.8
	2023	645	56.6	15.2	23.5	56.1	4.3	0.3	0.7	52.5	60.5
Hungary	2019	655	51.5	20.7	22.1	51.3	5.6	0.3	0.0	46.9	55.8
	2023	798	48.1	23.1	21.2	48.0	7.5	0.2	0.0	46.8	49.4
Israel	2019	529	64.9	15.8	15.8	64.7	3.3	0.4	0.0	63.8	65.9
	2023	760	55.0	23.9	14.6	54.2	5.8	0.5	0.9	50.9	59.0
Italy	2019	514	57.2	17.3	20.6	56.6	4.5	1.0	0.0	52.7	61.3
	2023	670	52.1	26.9	14.1	51.8	6.7	0.3	0.2	46.4	56.8
Korea, Rep. of	2019	548	82.9	1.5	15.1	82.8	0.4	0.1	0.0	80.4	85.1
	2023	849	72.1	5.4	21.6	71.9	0.8	0.0	0.2	71.4	72.8
Lithuania	2019	546	54.4	13.5	27.9	54.1	3.8	0.6	0.0	54.5	54.4
	2023	790	48.6	21.1	25.0	48.6	5.2	0.1	0.0	46.8	50.6
Malaysia	2019	1014	49.4	23.5	21.5	49.4	5.6	0.0	0.0	46.9	52.0
	2023	1275	39.9	29.7	20.1	39.4	9.6	0.4	0.7	34.9	45.4
Norway (9)	2019	644	46.2	23.6	15.9	44.6	12.4	2.9	0.4	42.6	49.8
	2023	908	36.7	31.4	12.2	35.3	17.3	1.7	2.0	36.9	36.5
Portugal	2019	476	67.6	12.2	16.8	67.2	3.2	0.5	0.0	66.6	68.5
	2023	774	58.9	19.9	16.3	58.6	4.6	0.5	0.0	57.8	60.0
Qatar	2019	551	39.8	29.4	23.5	39.3	6.5	0.8	0.4	43.8	35.9
	2023	618	45.4	27.0	16.6	44.6	10.0	0.7	1.1	44.1	46.6
Singapore	2019	688	77.9	11.1	8.4	77.6	2.5	0.4	0.0	74.8	81.0
	2023	948	76.2	13.8	6.1	76.1	3.8	0.0	0.2	72.1	79.9
Sweden	2019	565	53.7	22.3	14.4	52.1	8.4	2.9	0.0	54.5	53.0
	2023	725	44.5	23.2	16.2	43.0	14.2	2.7	0.6	43.5	45.4
United Arab Emirates	2019	3203	46.7	21.7	21.2	46.2	9.7	0.9	0.2	46.3	47.1
	2023	4045	49.6	23.4	17.0	49.0	9.3	0.5	0.7	48.4	50.8
United States	2019	1231	59.6	18.1	14.6	58.4	6.9	0.7	1.3	58.4	60.7
	2023	1168	53.7	22.6	13.8	52.4	8.8	0.4	1.9	52.4	54.9
International Avg. (20)	2019	15157	55.2	18.5	19.9	54.7	5.9	0.9	0.2	53.5	56.9
	2023	19541	51.4	22.0	18.4	50.8	7.6	0.6	0.7	49.6	53.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SD1_05 SE72066: Identify predators in diagram - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	41.2	23.2	25.2	40.7	9.6	0.9	0.3	40.4	41.9
	2023	1036	40.6	26.4	21.4	39.9	10.6	1.0	0.7	38.2	42.8
Dubai, UAE	2019	827	58.6	18.4	14.2	58.0	8.3	0.9	0.1	56.0	61.4
	2023	1178	62.2	18.7	10.2	61.8	8.5	0.1	0.7	63.0	61.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Science: Biology / Knowing

B_SD1_06 SE72063: How carbon gets into wood - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	25.5	23.8	25.0	41.2	8.0	1.7	0.4	23.0	28.3
	2023	648	23.9	25.7	22.9	35.8	11.5	3.0	1.0	22.2	25.7
Chinese Taipei	2019	723	36.2	30.2	35.9	30.1	3.1	0.5	0.2	38.2	34.3
	2023	1102	42.1	20.5	42.1	30.5	6.7	0.0	0.1	41.6	42.6
England	2019	480	35.2	21.8	34.0	30.6	10.2	3.1	0.4	40.8	29.8
	2023	601	34.4	24.8	33.3	26.6	12.0	1.5	1.9	33.6	35.5
Finland	2019	701	33.5	29.4	33.3	31.7	4.9	0.2	0.4	36.1	30.9
	2023	858	31.3	27.2	30.9	32.4	8.2	0.8	0.5	29.3	33.0
France	2019	558	28.4	18.2	27.9	39.0	13.2	1.7	0.0	29.2	27.6
	2023	651	30.9	18.2	30.5	36.5	13.6	1.0	0.2	25.9	35.6
Georgia	2019	468	28.7	28.1	28.0	28.8	12.7	2.4	0.0	25.4	32.0
	2023	708	32.2	27.8	31.5	24.3	14.3	1.4	0.7	29.8	34.5
Hong Kong SAR	2019	468	30.6	22.2	29.8	37.5	7.9	1.8	0.8	34.2	27.7
	2023	645	26.6	25.9	26.3	39.8	6.9	0.5	0.7	25.6	27.6
Hungary	2019	655	20.7	23.7	20.6	48.5	6.7	0.4	0.0	18.4	22.9
	2023	798	21.9	16.6	21.8	53.1	8.1	0.4	0.0	18.0	25.4
Israel	2019	529	43.0	31.4	42.6	19.8	5.3	0.9	0.0	39.8	46.1
	2023	760	38.9	28.1	38.1	23.8	7.8	1.1	1.0	36.9	40.8
Italy	2019	514	20.0	25.7	19.6	39.8	12.6	2.3	0.0	19.3	20.7
	2023	670	21.1	21.4	21.0	44.6	12.3	0.5	0.2	20.5	21.6
Korea, Rep. of	2019	548	33.4	34.1	33.4	29.1	3.4	0.0	0.0	35.1	31.9
	2023	849	43.0	25.6	42.9	24.3	7.0	0.0	0.2	43.5	42.6
Lithuania	2019	546	29.9	20.1	29.7	39.4	10.3	0.5	0.0	26.0	33.1
	2023	790	27.0	20.1	26.8	42.6	9.8	0.6	0.0	23.3	31.0
Malaysia	2019	1014	34.8	34.1	34.8	18.8	12.3	0.0	0.0	31.9	37.7
	2023	1275	28.2	28.8	27.8	25.2	17.0	0.2	1.1	27.6	28.8
Norway (9)	2019	644	32.6	26.3	31.7	27.0	12.5	2.0	0.5	35.3	30.5
	2023	908	36.2	27.4	35.0	23.7	10.5	1.0	2.4	37.6	34.9
Portugal	2019	476	36.8	24.7	36.7	29.6	8.7	0.3	0.0	37.9	35.8
	2023	774	36.8	20.1	36.5	33.7	8.9	0.8	0.0	33.4	40.0
Qatar	2019	551	31.8	34.5	31.3	24.8	7.6	1.4	0.4	27.5	36.2
	2023	618	34.4	27.4	33.7	26.8	10.2	0.5	1.3	33.0	35.5
Singapore	2019	688	44.5	23.0	44.5	27.0	5.5	0.0	0.0	45.0	44.0
	2023	948	51.8	20.3	51.7	22.9	4.9	0.0	0.2	51.1	52.4
Sweden	2019	565	30.6	23.7	30.1	37.8	6.7	1.5	0.2	28.4	32.4
	2023	725	34.5	20.5	33.6	36.6	6.7	1.5	1.1	31.7	36.9
United Arab Emirates	2019	3202	38.9	24.9	38.6	26.0	9.6	0.8	0.2	39.8	38.1
	2023	4045	39.4	23.7	38.9	25.4	10.6	0.6	0.9	39.9	39.0
United States	2019	1231	34.4	26.3	33.8	30.3	7.8	0.3	1.4	37.4	31.7
	2023	1168	34.9	20.7	34.0	30.4	12.3	0.3	2.3	34.3	35.5
International Avg. (20)	2019	15156	32.5	26.3	32.1	31.8	8.5	1.1	0.2	32.4	32.6
	2023	19541	33.5	23.5	33.0	32.0	10.0	0.8	0.8	31.9	34.9

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Science: Biology / Knowing
B_SD1_06 SE72063: How carbon gets into wood - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	33.5	22.3	33.2	30.4	13.3	0.5	0.3	35.7	31.3
	2023	1036	33.1	19.8	32.5	27.2	18.6	0.8	1.0	34.0	32.2
Dubai, UAE	2019	827	49.4	22.6	49.0	21.9	5.9	0.4	0.2	48.3	50.5
	2023	1178	46.6	21.5	46.1	25.3	6.1	0.4	0.7	47.2	46.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
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Science: Chemistry / Knowing

B_SD1_07 SE72102: Subatomic particle not included in diagram - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	54.9	33.4	40.7	25.4	0.5	57.8	51.6
	2023	648	42.7	41.1	30.6	26.9	1.5	41.0	44.4
Chinese Taipei	2019	723	47.1	49.8	44.4	5.5	0.2	45.7	48.5
	2023	1102	50.4	47.3	48.2	4.4	0.1	49.2	51.6
England	2019	480	63.3	32.2	55.6	11.8	0.4	67.9	58.7
	2023	601	61.3	33.2	52.5	12.4	1.9	58.6	64.5
Finland	2019	701	58.7	35.4	50.2	14.0	0.4	66.9	50.8
	2023	858	44.6	48.4	39.0	12.2	0.5	46.7	43.0
France	2019	558	15.3	51.9	9.4	38.5	0.3	12.9	17.2
	2023	650	22.4	52.8	15.2	31.8	0.2	19.3	24.9
Georgia	2019	469	56.3	30.6	39.4	30.1	0.0	58.5	54.1
	2023	708	67.6	24.1	50.2	24.8	0.8	74.8	60.9
Hong Kong SAR	2019	468	9.3	78.3	8.1	12.9	0.8	8.2	10.3
	2023	644	16.8	70.1	14.1	14.9	0.8	12.1	21.0
Hungary	2019	655	74.8	23.4	69.4	7.2	0.0	73.8	75.7
	2023	798	70.5	27.4	65.4	7.2	0.0	70.5	70.4
Israel	2019	529	58.7	35.4	50.4	14.1	0.0	61.3	56.2
	2023	760	51.3	39.5	41.6	17.8	1.1	53.3	49.6
Italy	2019	514	65.8	28.2	54.2	17.6	0.0	65.1	66.4
	2023	670	66.0	27.4	53.2	19.2	0.2	74.4	59.7
Korea, Rep. of	2019	548	20.5	69.8	18.0	12.2	0.0	16.4	24.3
	2023	849	22.9	67.7	20.1	12.0	0.2	21.2	24.5
Lithuania	2019	546	70.9	26.4	64.3	9.4	0.0	75.0	67.5
	2023	790	59.2	35.6	51.7	12.7	0.0	59.3	59.2
Malaysia	2019	1014	21.9	75.9	21.3	2.7	0.0	20.9	23.0
	2023	1275	17.7	79.1	17.0	2.7	1.3	17.1	18.2
Norway (9)	2019	644	56.4	33.1	42.8	23.4	0.7	61.6	51.5
	2023	908	50.0	41.1	41.1	15.2	2.5	50.1	49.8
Portugal	2019	476	55.3	38.3	47.3	14.4	0.0	51.7	58.5
	2023	774	53.5	40.2	46.2	13.4	0.2	50.5	56.2
Qatar	2019	551	50.4	45.0	45.7	8.9	0.4	59.9	40.6
	2023	618	50.7	44.3	45.6	8.4	1.6	58.3	43.9
Singapore	2019	688	70.7	28.5	68.9	2.6	0.0	71.8	69.6
	2023	948	60.6	38.8	59.6	1.4	0.2	55.2	65.3
Sweden	2019	565	54.0	39.6	46.5	13.7	0.2	57.0	51.5
	2023	725	62.0	33.8	55.1	9.9	1.2	62.7	61.3
United Arab Emirates	2019	3204	54.7	42.8	51.6	5.4	0.2	57.9	51.6
	2023	4045	56.0	41.5	52.8	4.6	1.1	57.3	54.7
United States	2019	1231	55.2	42.4	52.3	3.8	1.4	53.3	57.1
	2023	1167	50.1	47.3	47.5	2.9	2.3	46.1	53.8
International Avg. (20)	2019	15159	50.7	42.0	44.0	13.7	0.3	52.2	49.2
	2023	19538	48.8	44.0	42.3	12.7	0.9	48.9	48.9

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Science: Chemistry / Knowing

B_SD1_07 SE72102: Subatomic particle not included in diagram - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	40.3	56.2	38.0	5.5	0.3	42.4	38.5
	2023	1036	39.4	56.4	36.6	5.7	1.4	41.3	37.6
Dubai, UAE	2019	827	72.3	26.6	69.3	3.8	0.3	71.7	72.8
	2023	1178	67.0	31.6	64.0	3.7	0.8	65.9	67.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SD1_08A SE72141A: Best measurement to answer George's question - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	19.9	53.5	13.3	32.7	0.5	19.7	19.9
	2023	648	15.7	48.2	9.0	40.6	2.2	15.5	16.0
Chinese Taipei	2019	723	35.3	56.6	30.9	12.3	0.2	39.1	31.8
	2023	1102	35.6	58.3	32.3	9.0	0.4	36.7	34.7
England	2019	480	47.1	45.9	40.8	12.9	0.4	48.7	45.5
	2023	601	44.2	46.6	36.9	14.4	2.0	41.6	47.2
Finland	2019	701	52.4	40.1	44.2	15.3	0.4	58.7	46.3
	2023	858	46.6	45.6	39.7	14.0	0.7	53.4	40.8
France	2019	558	36.4	49.2	28.2	22.3	0.3	33.6	39.3
	2023	651	22.9	58.7	17.4	23.6	0.3	24.2	21.5
Georgia	2019	470	41.0	30.1	20.9	49.1	0.0	37.0	44.7
	2023	708	19.1	45.1	10.6	42.5	1.8	19.3	18.9
Hong Kong SAR	2019	468	34.3	48.9	25.5	24.7	1.0	39.5	29.4
	2023	644	31.4	52.9	24.2	21.8	1.0	30.5	32.2
Hungary	2019	655	51.9	36.2	39.0	24.8	0.0	56.6	47.7
	2023	798	45.3	42.9	35.6	21.3	0.2	46.2	44.5
Israel	2019	529	40.6	51.0	34.9	14.0	0.0	43.9	37.5
	2023	760	36.2	49.0	27.8	21.6	1.6	36.7	35.7
Italy	2019	514	23.7	56.5	17.6	26.0	0.0	28.0	19.8
	2023	670	21.6	56.3	15.5	27.7	0.6	20.4	22.5
Korea, Rep. of	2019	548	44.4	47.5	37.9	14.6	0.0	46.5	42.4
	2023	849	24.7	64.5	21.1	14.2	0.2	26.3	23.1
Lithuania	2019	546	49.1	41.6	40.1	18.3	0.0	54.0	45.1
	2023	790	39.0	45.9	29.3	24.8	0.0	41.0	36.7
Malaysia	2019	1014	9.1	85.6	8.6	5.8	0.0	8.5	9.8
	2023	1275	5.4	85.6	4.9	8.1	1.3	5.0	5.9
Norway (9)	2019	644	27.8	53.9	20.8	24.5	0.8	32.2	24.5
	2023	908	20.5	61.8	16.0	19.6	2.6	20.9	20.2
Portugal	2019	476	27.6	57.9	22.1	20.1	0.0	28.4	26.9
	2023	774	27.8	54.2	20.9	24.4	0.5	27.1	28.6
Qatar	2019	551	29.3	55.8	23.1	20.8	0.4	31.4	27.0
	2023	618	19.4	66.0	15.9	16.2	1.9	21.3	17.6
Singapore	2019	688	51.8	46.7	50.2	3.1	0.0	52.0	51.6
	2023	948	51.3	47.0	49.6	3.1	0.3	51.7	51.0
Sweden	2019	565	49.3	40.9	39.7	19.2	0.3	50.4	48.2
	2023	724	48.4	41.1	38.6	18.4	2.0	49.3	47.6
United Arab Emirates	2019	3202	29.1	60.4	24.8	14.5	0.2	31.5	26.6
	2023	4043	29.3	60.5	25.1	12.9	1.5	28.4	30.2
United States	2019	1231	41.2	54.3	38.1	6.1	1.5	41.5	40.9
	2023	1168	37.9	57.4	35.1	5.0	2.6	39.9	36.0
International Avg. (20)	2019	15158	37.1	50.6	30.0	19.0	0.3	39.1	35.2
	2023	19537	31.1	54.4	25.3	19.2	1.2	31.8	30.5

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SD1_08A SE72141A: Best measurement to answer George's question - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	19.4	67.1	16.1	16.4	0.4	20.7	18.1
	2023	1035	22.0	66.1	18.6	13.6	1.7	19.7	24.1
Dubai, UAE	2019	827	45.0	50.1	41.0	8.5	0.3	50.9	38.3
	2023	1178	42.7	51.0	38.0	10.1	0.9	41.4	43.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SD1_08B SE72141B: Variables George should hold constant - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	17.0	41.6	11.5	4.0	42.5	0.6	14.8	19.2
	2023	648	15.3	36.0	9.1	2.8	49.3	2.8	13.9	16.7
Chinese Taipei	2019	723	55.5	26.9	25.7	36.7	10.5	0.2	59.5	51.7
	2023	1102	41.6	39.5	29.1	24.0	7.0	0.4	43.6	39.7
England	2019	480	47.9	26.9	30.2	23.6	18.9	0.4	54.3	41.5
	2023	601	58.8	24.3	17.0	38.3	18.2	2.2	58.5	59.1
Finland	2019	701	41.6	27.1	28.4	15.2	29.0	0.4	45.1	38.2
	2023	858	27.1	45.4	18.1	11.2	24.4	0.9	29.2	25.5
France	2019	558	28.8	34.7	15.0	9.5	40.5	0.3	26.6	31.1
	2023	651	22.4	39.2	14.2	6.3	40.0	0.4	22.4	22.3
Georgia	2019	470	12.3	27.8	5.4	1.6	65.2	0.0	12.8	11.6
	2023	708	9.3	36.5	3.8	2.0	55.2	2.4	12.9	6.1
Hong Kong SAR	2019	468	43.8	30.0	29.4	20.2	19.4	1.0	49.3	39.1
	2023	644	55.5	26.9	20.3	36.1	15.7	1.0	57.0	54.1
Hungary	2019	655	18.7	41.6	9.3	6.0	43.1	0.0	19.4	18.1
	2023	798	12.4	51.7	8.0	3.9	36.3	0.2	11.2	13.4
Israel	2019	529	57.4	27.1	19.7	39.9	13.3	0.0	55.3	59.4
	2023	760	49.7	26.5	26.5	26.0	19.1	2.0	49.1	50.2
Italy	2019	514	28.8	34.7	22.0	7.4	35.8	0.0	26.9	30.3
	2023	670	30.8	32.7	19.3	9.2	38.1	0.7	32.8	29.2
Korea, Rep. of	2019	548	92.2	4.5	5.1	80.3	10.2	0.0	93.4	91.1
	2023	849	63.5	11.8	41.2	35.8	10.9	0.2	66.6	60.4
Lithuania	2019	546	30.1	36.0	13.9	11.5	38.6	0.0	29.5	30.7
	2023	790	31.5	34.9	13.2	12.5	39.4	0.0	31.7	31.3
Malaysia	2019	1014	24.6	59.6	22.3	12.0	5.9	0.2	25.9	23.3
	2023	1275	7.3	81.1	7.9	2.8	6.4	1.8	7.0	7.7
Norway (9)	2019	644	22.1	35.8	9.6	6.7	47.0	0.9	26.3	18.8
	2023	908	15.9	46.0	8.5	5.2	37.0	3.2	18.6	13.7
Portugal	2019	476	36.6	35.4	17.6	16.8	30.2	0.0	36.7	36.6
	2023	774	38.7	32.0	20.5	16.4	30.6	0.5	41.8	35.8
Qatar	2019	551	24.8	48.6	20.0	9.3	21.7	0.4	26.9	22.3
	2023	618	21.0	55.5	17.2	8.4	16.3	2.6	19.7	22.2
Singapore	2019	688	76.8	11.9	21.2	63.8	3.0	0.1	78.7	74.9
	2023	948	78.5	12.4	17.4	68.0	1.9	0.3	78.3	78.6
Sweden	2019	565	27.8	35.4	11.2	10.2	42.8	0.5	29.1	26.7
	2023	725	22.5	42.9	9.8	9.0	36.1	2.2	22.3	22.6
United Arab Emirates	2019	3203	26.3	54.4	13.4	15.1	16.8	0.4	27.1	25.5
	2023	4045	30.2	48.5	18.0	15.9	15.7	1.9	31.4	29.1
United States	2019	1231	43.8	39.2	23.1	28.0	8.1	1.5	44.2	43.4
	2023	1168	33.1	50.3	19.5	20.0	7.0	3.2	27.7	38.1
International Avg. (20)	2019	15159	37.8	33.9	17.7	20.9	27.1	0.3	39.1	36.7
	2023	19540	33.2	38.7	16.9	17.7	25.2	1.4	33.8	32.8

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SD1_08B SE72141B: Variables George should hold constant - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	17.5	60.8	10.8	8.6	19.2	0.6	18.1	16.8
	2023	1036	17.5	60.7	12.6	7.9	16.5	2.3	19.8	15.2
Dubai, UAE	2019	827	49.5	36.1	18.7	35.2	9.6	0.4	51.3	47.5
	2023	1178	47.1	31.8	27.5	26.8	12.5	1.3	47.0	47.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Applying
B_SD1_09 SE72921: Combining Solution 2 and Solution 3 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	0.4	83.6	0.4	15.5	0.6	0.3	0.5
	2023	648	1.7	77.9	1.3	17.7	3.0	2.4	0.9
Chinese Taipei	2019	723	47.2	52.5	46.9	0.4	0.2	53.6	41.3
	2023	1102	46.1	53.5	45.7	0.3	0.4	49.5	43.0
England	2019	480	23.5	72.9	22.4	4.3	0.4	26.8	20.1
	2023	601	19.1	75.9	17.9	4.1	2.2	16.5	21.8
Finland	2019	701	29.0	69.5	28.3	1.7	0.4	35.0	23.0
	2023	858	24.3	73.4	23.5	2.2	0.9	30.0	19.2
France	2019	558	2.3	89.0	2.1	8.6	0.3	2.9	1.8
	2023	651	1.9	92.9	1.8	4.8	0.5	1.3	2.5
Georgia	2019	469	5.3	82.9	4.6	12.0	0.4	6.1	4.5
	2023	707	5.5	82.8	4.8	9.8	2.7	3.7	7.2
Hong Kong SAR	2019	468	38.1	60.1	37.0	1.9	1.0	44.4	33.0
	2023	644	40.3	58.7	39.6	0.7	1.0	41.7	38.9
Hungary	2019	655	23.4	75.1	22.9	2.0	0.0	22.6	24.1
	2023	798	18.5	80.7	18.4	0.8	0.2	18.0	19.1
Israel	2019	529	8.5	86.6	8.1	5.4	0.0	9.8	7.3
	2023	760	6.1	87.3	5.7	4.9	2.1	4.5	7.6
Italy	2019	514	8.8	84.6	8.2	6.9	0.3	8.4	9.2
	2023	670	4.5	90.8	4.3	4.2	0.7	4.5	4.6
Korea, Rep. of	2019	548	12.1	85.0	11.7	3.3	0.0	10.5	13.6
	2023	849	9.3	87.8	9.0	2.9	0.2	11.1	7.5
Lithuania	2019	546	7.0	90.3	6.8	2.9	0.0	8.0	6.3
	2023	790	2.9	95.4	2.9	1.7	0.0	2.8	3.0
Malaysia	2019	1014	19.3	79.8	19.1	1.0	0.2	21.5	17.2
	2023	1275	10.7	86.3	10.3	1.2	2.2	9.7	11.8
Norway (9)	2019	644	18.4	76.6	17.2	5.1	1.0	23.1	13.5
	2023	908	6.3	84.6	5.7	6.0	3.7	7.6	5.2
Portugal	2019	476	34.5	63.4	33.4	3.2	0.0	36.1	32.9
	2023	774	23.4	75.0	22.9	1.6	0.5	25.7	21.2
Qatar	2019	551	19.3	79.1	18.9	1.5	0.4	23.9	14.8
	2023	618	10.8	86.2	10.4	0.8	2.6	11.9	9.8
Singapore	2019	688	53.0	46.9	52.8	0.2	0.1	54.7	51.3
	2023	947	52.6	47.1	52.3	0.3	0.3	54.7	50.8
Sweden	2019	565	31.9	65.0	30.4	3.9	0.7	39.5	25.4
	2023	725	26.9	68.5	25.2	3.9	2.4	28.4	25.5
United Arab Emirates	2019	3202	19.2	78.3	18.7	2.6	0.4	20.7	17.9
	2023	4045	19.6	76.4	18.6	2.7	2.3	19.5	19.7
United States	2019	1231	3.8	91.6	3.6	3.3	1.5	3.8	3.7
	2023	1167	5.3	89.0	5.0	2.7	3.3	5.5	5.1
International Avg. (20)	2019	15157	20.3	75.6	19.7	4.3	0.4	22.6	18.1
	2023	19537	16.8	78.5	16.3	3.7	1.6	17.4	16.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Applying
B_SD1_09 SE72921: Combining Solution 2 and Solution 3 - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1172 1036	12.5 9.8	85.0 85.2	12.1 9.3	2.3 2.9	0.6 2.7	15.0 9.8	10.2 9.8
Dubai, UAE	2019 2023	827 1178	33.9 32.6	64.2 64.2	33.0 31.0	2.5 2.7	0.4 2.1	35.4 31.5	32.4 33.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SD1_10 SE72234: Energy transfer during temperature change - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	28.6	23.1	24.3	20.3	27.1	4.6	0.6	28.7	28.5
	2023	648	21.7	20.5	28.4	22.9	19.9	5.1	3.2	21.5	22.0
Chinese Taipei	2019	723	48.1	29.0	11.3	11.3	47.7	0.6	0.2	47.2	48.8
	2023	1102	47.8	28.3	12.0	11.6	47.5	0.2	0.4	47.0	48.6
England	2019	480	35.0	23.2	17.1	23.3	34.3	1.7	0.4	33.8	36.2
	2023	601	34.5	25.4	21.1	16.7	33.2	1.4	2.2	33.3	35.7
Finland	2019	701	42.0	32.8	12.0	12.5	41.6	0.5	0.4	40.0	44.1
	2023	858	38.6	26.5	15.9	17.6	37.7	1.4	0.9	37.6	39.4
France	2019	558	21.1	30.4	19.7	26.3	20.5	2.9	0.3	19.4	22.8
	2023	651	20.3	26.1	25.6	26.5	19.9	1.4	0.5	17.1	23.4
Georgia	2019	469	19.6	38.1	14.5	24.1	18.8	4.1	0.4	19.8	19.5
	2023	708	19.0	37.9	18.8	19.9	18.0	2.6	2.7	17.4	20.7
Hong Kong SAR	2019	468	33.8	24.3	25.0	15.5	33.1	1.2	1.0	36.8	31.4
	2023	645	36.0	22.9	24.3	15.7	35.4	0.6	1.0	31.5	40.3
Hungary	2019	655	36.9	33.3	12.4	16.7	36.6	1.0	0.0	27.8	45.6
	2023	798	30.3	33.7	16.1	19.8	30.3	0.0	0.2	26.0	34.4
Israel	2019	529	25.4	30.2	22.6	20.5	24.9	1.9	0.0	20.8	29.7
	2023	760	25.2	28.4	21.9	21.1	24.0	2.3	2.3	20.8	29.1
Italy	2019	514	25.6	21.5	26.2	24.6	24.9	2.4	0.3	22.4	28.6
	2023	670	24.9	22.7	24.1	26.8	24.5	1.2	0.7	24.9	25.0
Korea, Rep. of	2019	548	37.6	18.5	17.8	25.2	37.1	1.3	0.0	35.3	39.7
	2023	849	33.4	23.1	18.2	25.0	33.2	0.2	0.2	31.3	35.5
Lithuania	2019	546	38.2	35.5	12.8	13.2	37.9	0.6	0.0	35.5	40.3
	2023	790	35.5	32.2	17.7	14.2	35.3	0.6	0.0	32.9	38.4
Malaysia	2019	1014	31.7	24.0	23.8	20.2	31.5	0.3	0.2	31.5	31.9
	2023	1275	24.8	21.8	25.6	25.0	24.0	0.7	2.8	25.4	24.3
Norway (9)	2019	644	32.3	26.6	20.1	18.1	30.9	3.4	1.0	27.1	36.2
	2023	908	29.9	25.1	22.6	18.6	28.3	1.6	3.7	28.7	31.1
Portugal	2019	476	28.4	27.3	17.9	24.7	27.8	2.3	0.0	25.8	30.9
	2023	774	28.6	27.4	20.1	22.8	28.1	0.9	0.7	26.1	30.9
Qatar	2019	551	21.1	31.7	24.0	21.6	20.6	1.7	0.4	23.5	18.7
	2023	618	23.6	30.7	20.0	23.4	22.9	0.3	2.6	25.3	22.0
Singapore	2019	688	50.5	17.5	19.8	12.0	50.3	0.3	0.1	46.4	54.8
	2023	948	50.8	19.4	18.9	10.5	50.5	0.1	0.5	50.0	51.5
Sweden	2019	565	42.2	24.4	15.1	15.7	40.2	3.8	0.7	37.9	45.8
	2023	725	36.6	23.4	19.2	17.6	34.7	2.5	2.6	34.6	38.4
United Arab Emirates	2019	3202	25.7	26.3	25.3	20.9	25.1	2.0	0.4	23.9	27.5
	2023	4045	26.6	27.6	24.2	18.8	25.6	1.1	2.8	25.0	28.1
United States	2019	1231	31.4	21.8	27.8	17.3	30.6	1.1	1.5	30.7	32.0
	2023	1168	32.6	19.4	28.8	16.2	31.2	0.7	3.7	32.8	32.4
International Avg. (20)	2019	15157	32.8	27.0	19.5	19.2	32.1	1.9	0.4	30.7	34.6
	2023	19541	31.0	26.1	21.2	19.5	30.2	1.3	1.7	29.5	32.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SD1_10 SE72234: Energy transfer during temperature change - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	22.8	24.7	28.2	22.4	22.2	1.7	0.8	21.2	24.1
	2023	1036	18.6	24.5	30.3	22.9	17.7	1.1	3.5	17.6	19.5
Dubai, UAE	2019	827	30.7	29.2	21.8	16.7	29.9	2.0	0.4	28.7	32.7
	2023	1178	34.7	27.7	22.9	12.3	33.5	1.2	2.5	29.8	39.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Science: Physics / Reasoning
B_SD1_11 SE72251: Where Megan should stand - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	29.1	28.6	14.3	41.6	13.7	1.3	0.6	28.2	30.0
	2023	648	24.4	22.9	17.5	37.0	16.5	2.3	3.8	21.8	27.1
Chinese Taipei	2019	723	62.8	62.4	4.2	23.4	9.3	0.5	0.2	61.8	63.8
	2023	1102	60.5	60.2	4.8	25.2	9.3	0.1	0.4	62.0	59.2
England	2019	480	39.9	39.0	10.0	38.8	9.8	2.0	0.4	34.6	45.3
	2023	601	36.5	35.5	13.1	36.6	12.1	0.5	2.3	34.8	38.3
Finland	2019	701	68.9	68.4	6.5	13.4	10.9	0.3	0.4	68.5	69.4
	2023	858	59.5	58.1	11.6	18.1	9.9	1.4	0.9	58.5	60.4
France	2019	558	45.5	45.0	9.3	32.6	12.1	0.7	0.3	45.1	45.8
	2023	651	41.2	40.8	10.7	34.6	12.9	0.3	0.6	41.2	41.1
Georgia	2019	468	37.9	36.7	11.8	28.5	19.9	2.0	1.1	34.8	40.9
	2023	708	38.8	36.9	17.7	28.1	12.4	1.2	3.7	36.5	41.1
Hong Kong SAR	2019	468	39.7	39.0	8.9	37.9	12.5	0.7	1.0	44.8	35.6
	2023	645	45.7	44.7	10.4	31.5	11.3	1.0	1.2	41.9	49.3
Hungary	2019	655	18.0	18.0	8.2	64.9	8.8	0.1	0.0	15.3	20.6
	2023	798	20.8	20.7	11.2	57.8	10.0	0.0	0.2	18.4	22.9
Israel	2019	529	40.2	39.8	8.8	35.8	14.6	1.0	0.0	36.8	43.5
	2023	760	33.3	32.0	13.6	34.3	16.2	0.8	3.2	28.6	37.6
Italy	2019	514	43.5	43.0	5.3	38.7	11.9	0.8	0.3	38.5	48.2
	2023	670	34.1	33.5	12.0	38.4	14.3	0.9	0.8	35.3	33.1
Korea, Rep. of	2019	548	59.8	59.4	6.9	24.6	8.4	0.7	0.0	59.7	60.0
	2023	849	50.4	50.2	7.3	31.8	10.2	0.3	0.2	48.8	52.0
Lithuania	2019	546	56.0	55.9	5.7	28.8	9.5	0.2	0.0	58.4	54.0
	2023	790	50.4	50.4	9.8	27.3	12.6	0.0	0.0	48.6	52.4
Malaysia	2019	1014	38.8	38.6	12.0	38.4	10.5	0.4	0.2	35.7	41.9
	2023	1275	31.8	30.6	16.8	34.1	14.7	0.4	3.4	31.1	32.5
Norway (9)	2019	644	31.5	29.9	10.8	46.2	8.2	3.6	1.4	27.1	35.4
	2023	908	29.9	28.4	13.6	41.7	11.4	1.0	3.8	25.6	33.8
Portugal	2019	476	45.4	45.1	8.6	35.3	10.3	0.7	0.0	43.2	47.6
	2023	774	32.4	32.1	11.3	42.3	13.2	0.5	0.7	29.4	35.4
Qatar	2019	551	35.7	35.1	17.0	23.8	22.5	1.2	0.4	32.2	39.1
	2023	618	32.9	32.0	16.5	29.1	19.6	0.2	2.7	31.6	34.1
Singapore	2019	688	52.3	52.1	4.3	33.8	9.5	0.2	0.2	47.7	57.1
	2023	948	50.8	50.4	6.2	33.1	9.6	0.0	0.6	46.5	54.5
Sweden	2019	565	60.1	58.6	8.6	18.1	12.2	1.5	1.1	57.3	62.5
	2023	725	52.6	50.1	10.9	21.6	12.6	1.4	3.4	49.2	55.7
United Arab Emirates	2019	3203	35.3	34.6	14.2	33.0	16.4	1.3	0.5	32.5	37.9
	2023	4045	36.2	34.6	15.7	31.4	14.0	1.2	3.1	33.9	38.4
United States	2019	1231	47.7	46.7	10.1	30.3	10.8	0.6	1.5	44.3	50.9
	2023	1168	39.3	37.7	15.5	30.0	12.7	0.3	3.9	38.8	39.7
International Avg. (20)	2019	15157	44.4	43.8	9.3	33.4	12.1	1.0	0.5	42.3	46.5
	2023	19541	40.1	39.1	12.3	33.2	12.8	0.7	2.0	38.1	41.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Reasoning
B_SD1_11 SE72251: Where Megan should stand - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	30.9	30.3	16.8	34.5	16.2	1.3	0.9	28.6	33.0
	2023	1036	31.1	29.6	19.6	28.6	17.4	1.1	3.8	28.3	33.7
Dubai, UAE	2019	827	44.0	43.4	8.5	34.5	12.2	0.9	0.5	41.0	47.2
	2023	1178	42.4	40.6	9.8	34.9	10.5	1.6	2.6	41.0	43.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Knowing

B_SD1_12 SE72284: Force represented by arrow in picture - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	65.3	28.3	53.1	18.0	0.6	55.0	75.1
	2023	648	56.9	32.4	42.8	20.4	4.3	46.7	66.2
Chinese Taipei	2019	723	71.9	27.4	70.2	2.2	0.2	69.5	74.1
	2023	1102	65.2	33.8	63.4	2.4	0.4	58.3	71.6
England	2019	480	72.3	26.1	67.9	5.6	0.4	70.4	74.2
	2023	601	64.0	32.9	58.4	6.4	2.3	62.0	66.1
Finland	2019	701	76.3	22.3	72.0	5.3	0.4	73.3	79.4
	2023	858	71.5	26.7	67.0	5.3	0.9	73.3	70.1
France	2019	558	50.1	44.7	44.9	10.1	0.3	42.6	56.7
	2023	651	51.3	42.9	45.2	11.2	0.8	38.5	63.0
Georgia	2019	469	27.1	60.5	22.5	15.8	1.1	24.1	30.0
	2023	708	51.9	39.9	43.1	12.8	4.2	49.5	54.1
Hong Kong SAR	2019	468	60.6	36.4	55.9	6.7	1.0	56.0	64.4
	2023	645	55.6	41.3	51.8	5.4	1.6	53.8	57.4
Hungary	2019	655	78.5	19.6	71.3	9.1	0.0	74.1	82.6
	2023	798	69.5	29.0	66.1	4.8	0.2	63.6	74.9
Israel	2019	529	59.2	37.3	54.2	8.5	0.0	58.7	59.6
	2023	760	62.5	32.9	54.7	9.0	3.4	60.0	64.7
Italy	2019	514	63.6	32.4	56.6	10.4	0.6	56.6	69.7
	2023	670	61.3	33.4	52.8	12.7	1.1	51.7	68.5
Korea, Rep. of	2019	548	58.8	39.6	56.4	4.0	0.0	56.0	61.3
	2023	849	78.4	20.6	75.1	4.0	0.2	74.3	82.4
Lithuania	2019	546	66.6	31.3	62.4	6.3	0.0	67.1	66.2
	2023	790	64.9	31.8	58.9	9.3	0.0	67.5	62.3
Malaysia	2019	1014	38.2	60.9	37.7	1.0	0.3	37.4	39.0
	2023	1275	21.3	73.9	20.0	2.5	3.6	16.8	26.2
Norway (9)	2019	644	74.1	23.0	65.8	9.4	1.8	76.7	72.0
	2023	908	56.1	38.7	49.4	7.9	4.0	53.0	59.0
Portugal	2019	476	61.2	33.0	51.9	15.1	0.0	53.7	67.6
	2023	774	59.1	34.5	49.8	14.6	1.1	53.0	64.4
Qatar	2019	551	56.7	40.2	52.5	6.8	0.6	55.0	58.4
	2023	618	54.6	42.5	51.1	3.5	2.9	50.9	58.1
Singapore	2019	688	63.6	36.1	63.1	0.6	0.2	63.1	64.1
	2023	948	80.1	19.7	79.3	0.4	0.6	76.1	83.8
Sweden	2019	565	72.1	26.2	67.6	5.1	1.1	70.9	73.0
	2023	725	65.6	30.7	58.4	6.8	4.1	59.1	71.6
United Arab Emirates	2019	3203	58.6	38.7	54.7	6.1	0.5	57.4	59.7
	2023	4045	62.2	35.0	57.5	4.0	3.5	62.2	62.1
United States	2019	1231	69.3	29.5	66.5	2.5	1.6	65.7	72.6
	2023	1168	68.1	30.1	64.3	1.6	4.0	58.3	77.2
International Avg. (20)	2019	15158	62.2	34.7	57.4	7.4	0.5	59.2	65.0
	2023	19541	61.0	35.1	55.5	7.3	2.2	56.4	65.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Knowing

B_SD1_12 SE72284: Force represented by arrow in picture - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	44.9	50.4	41.1	7.6	0.9	43.9	45.9
	2023	1036	46.5	48.8	42.4	4.8	4.1	45.7	47.3
Dubai, UAE	2019	827	74.4	24.8	71.9	2.8	0.5	72.3	76.5
	2023	1178	73.7	24.4	68.4	4.0	3.2	71.3	75.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Applying
B_SD1_13 SE72345: Reduce, reuse, recycle (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	37.3	39.2	41.4	15.0	3.6	0.8	39.6	34.7
	2023	648	30.9	46.1	34.2	11.1	3.9	4.6	33.0	28.7
Chinese Taipei	2019	723	43.5	31.6	49.5	18.6	0.1	0.2	45.8	41.3
	2023	1102	37.3	41.8	41.1	16.6	0.1	0.4	39.4	35.4
England	2019	480	50.9	25.9	43.3	27.7	2.4	0.6	53.6	48.4
	2023	601	48.6	27.9	43.6	25.3	0.5	2.6	49.9	47.2
Finland	2019	701	52.7	21.6	50.3	26.9	0.7	0.4	56.5	48.9
	2023	858	45.0	30.9	45.2	21.1	1.7	1.0	47.5	42.7
France	2019	558	45.3	29.4	48.3	20.2	1.7	0.5	49.3	41.5
	2023	651	48.3	30.0	39.9	26.8	2.2	1.2	51.3	45.3
Georgia	2019	467	25.0	53.4	29.7	8.0	7.8	1.1	27.5	22.6
	2023	708	24.9	53.4	29.8	7.7	4.5	4.6	24.2	25.6
Hong Kong SAR	2019	468	39.6	37.4	44.0	16.9	0.8	1.0	39.8	39.4
	2023	644	47.6	26.4	49.0	21.8	0.8	1.9	48.6	46.8
Hungary	2019	655	45.2	36.2	36.8	26.6	0.4	0.0	43.4	46.8
	2023	798	46.7	33.5	38.5	27.1	0.6	0.3	48.3	45.3
Israel	2019	529	51.5	27.5	41.0	30.5	1.0	0.0	51.3	51.7
	2023	760	42.7	38.1	32.3	24.2	1.6	3.7	44.6	40.9
Italy	2019	514	47.1	28.7	46.3	23.0	1.4	0.6	48.0	46.2
	2023	670	44.6	33.0	41.3	22.6	1.7	1.5	45.0	44.3
Korea, Rep. of	2019	548	73.3	10.6	31.7	56.6	1.1	0.0	73.2	73.3
	2023	849	74.8	10.6	28.9	59.8	0.5	0.2	75.6	74.0
Lithuania	2019	546	45.0	29.6	49.0	19.8	1.6	0.0	44.0	45.8
	2023	790	44.9	30.2	48.6	20.2	1.1	0.0	48.4	41.1
Malaysia	2019	1014	30.7	46.1	45.3	7.8	0.4	0.5	32.3	29.1
	2023	1275	23.5	55.7	33.9	5.4	0.9	4.2	24.5	22.4
Norway (9)	2019	644	46.4	26.6	47.6	19.9	3.7	2.2	46.4	46.5
	2023	908	38.6	33.7	46.6	12.6	2.7	4.4	40.5	36.9
Portugal	2019	476	44.1	26.4	57.8	14.6	1.2	0.0	45.9	42.3
	2023	774	43.5	29.6	51.9	16.9	0.4	1.1	45.1	42.0
Qatar	2019	551	35.7	44.2	36.1	16.6	2.4	0.7	39.7	31.8
	2023	618	39.2	39.3	38.6	18.4	0.7	3.0	43.2	35.4
Singapore	2019	688	54.1	17.6	56.3	25.8	0.0	0.2	53.4	54.8
	2023	948	56.1	18.9	49.3	31.0	0.2	0.6	54.8	57.3
Sweden	2019	565	44.4	32.2	40.7	21.5	4.4	1.1	46.7	42.3
	2023	725	43.7	34.2	35.7	22.5	2.9	4.7	46.2	41.4
United Arab Emirates	2019	3200	33.8	45.8	38.0	14.1	1.5	0.6	37.5	30.3
	2023	4045	37.4	41.2	35.6	17.5	1.6	4.0	39.3	35.6
United States	2019	1231	50.0	25.3	47.0	25.3	0.7	1.7	53.5	46.7
	2023	1168	47.8	28.0	43.5	23.8	0.7	4.1	48.0	47.6
International Avg. (20)	2019	15153	44.8	31.8	44.0	21.8	1.8	0.6	46.4	43.2
	2023	19540	43.3	34.1	40.4	21.6	1.5	2.4	44.9	41.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Applying
B_SD1_13 SE72345: Reduce, reuse, recycle (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	25.3	57.6	29.5	9.8	2.1	1.0	28.6	22.3
	2023	1036	27.9	53.0	28.7	11.7	2.1	4.5	29.7	26.2
Dubai, UAE	2019	827	48.1	27.1	48.1	23.4	0.8	0.5	52.5	43.6
	2023	1178	51.0	26.4	40.4	28.3	1.3	3.6	51.5	50.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Reasoning

B_SD1_14 SE72349: Why an area floods more often after a forest is cleared - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	63.8	62.6	14.7	15.5	5.3	0.9	1.0	63.9	63.6
	2023	648	54.5	49.9	15.3	18.0	8.5	2.5	5.8	55.8	53.0
Chinese Taipei	2019	723	80.1	79.7	4.6	10.4	4.7	0.3	0.2	78.4	81.8
	2023	1102	74.4	74.0	6.8	12.5	6.2	0.1	0.4	73.7	75.0
England	2019	480	68.2	66.4	15.7	10.0	5.3	1.7	0.9	68.7	67.7
	2023	601	59.5	57.6	23.0	10.3	5.9	0.3	2.9	62.8	55.8
Finland	2019	701	72.5	71.9	12.5	11.8	3.0	0.1	0.7	73.2	71.7
	2023	858	62.8	61.7	17.3	12.9	6.4	0.7	1.0	63.8	61.9
France	2019	558	62.8	61.7	9.7	13.2	13.6	1.1	0.6	63.2	62.4
	2023	651	57.3	56.0	14.6	12.9	14.3	0.2	1.9	56.5	58.0
Georgia	2019	468	49.1	47.6	28.7	14.3	6.3	2.0	1.1	50.9	47.4
	2023	708	46.8	43.5	28.8	14.3	6.3	0.3	6.7	46.4	47.3
Hong Kong SAR	2019	468	63.0	61.4	17.2	13.8	5.1	1.0	1.4	60.1	65.4
	2023	645	68.2	65.7	12.6	13.3	4.6	1.3	2.4	64.7	71.6
Hungary	2019	655	63.3	63.0	20.2	12.3	4.0	0.5	0.0	62.0	64.5
	2023	798	55.8	55.4	25.1	14.9	3.8	0.2	0.5	55.1	56.5
Israel	2019	529	69.0	68.6	13.7	10.1	7.1	0.5	0.0	73.1	65.0
	2023	760	58.8	55.4	17.3	14.2	7.4	0.8	4.8	59.3	58.3
Italy	2019	514	57.8	56.6	18.9	16.1	6.2	1.5	0.7	56.1	59.5
	2023	670	49.6	48.7	22.3	18.4	8.7	0.1	1.7	49.4	49.8
Korea, Rep. of	2019	548	78.9	77.9	13.4	3.9	3.6	1.2	0.0	81.4	76.6
	2023	849	78.9	78.5	12.7	4.6	3.8	0.2	0.3	81.1	76.7
Lithuania	2019	546	66.1	65.6	11.6	17.0	5.1	0.8	0.0	69.9	63.1
	2023	790	56.5	56.2	16.8	18.4	8.1	0.3	0.3	54.8	58.3
Malaysia	2019	1014	46.5	45.9	29.9	16.9	6.0	0.5	0.9	45.7	47.3
	2023	1275	38.4	36.2	33.3	16.5	8.2	0.4	5.4	37.0	40.0
Norway (9)	2019	644	69.1	65.7	8.7	11.5	9.2	2.6	2.3	72.3	66.3
	2023	908	62.6	58.8	12.8	15.0	7.4	0.9	5.0	66.0	59.3
Portugal	2019	476	71.5	71.1	11.4	11.2	5.8	0.5	0.0	67.3	75.5
	2023	774	61.7	60.3	12.3	15.2	9.8	0.8	1.6	63.9	59.7
Qatar	2019	551	49.0	48.3	26.1	14.3	9.8	0.1	1.3	49.5	48.6
	2023	618	45.6	43.4	23.4	17.5	10.9	1.1	3.6	49.7	41.6
Singapore	2019	688	77.6	77.0	15.4	4.6	2.3	0.3	0.4	78.0	77.1
	2023	948	75.2	74.6	14.5	6.2	4.0	0.1	0.6	73.4	76.7
Sweden	2019	565	71.3	68.6	15.2	5.8	6.6	1.5	2.3	74.1	68.8
	2023	725	65.5	60.7	18.3	7.4	6.3	1.9	5.5	64.1	66.8
United Arab Emirates	2019	3202	48.9	47.5	22.1	16.0	11.6	2.0	0.8	49.9	47.9
	2023	4045	51.7	48.3	20.1	15.2	9.7	1.1	5.7	49.7	53.7
United States	2019	1231	68.6	66.4	16.5	8.6	5.3	1.4	1.7	70.1	67.1
	2023	1168	63.1	59.8	18.0	10.4	6.6	0.8	4.5	59.5	66.6
International Avg. (20)	2019	15156	64.8	63.7	16.3	11.9	6.3	1.0	0.8	65.4	64.4
	2023	19541	59.3	57.2	18.3	13.4	7.3	0.7	3.0	59.3	59.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Science: Earth Science / Reasoning

B_SD1_14 SE72349: Why an area floods more often after a forest is cleared - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	38.2	37.0	20.9	22.2	16.7	1.9	1.2	37.5	38.7
	2023	1036	39.4	36.8	22.6	21.6	12.5	0.9	5.7	36.6	42.0
Dubai, UAE	2019	827	64.2	62.5	19.2	9.3	6.4	1.7	0.9	64.5	63.8
	2023	1178	65.2	60.9	16.5	9.1	6.9	1.2	5.4	62.2	67.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing

B_SD1_15 SE72363: How the Sun produces light - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	595	58.0	16.4	5.4	56.2	18.9	1.9	1.2	54.1	62.1
	2023	648	59.5	14.0	7.1	54.3	15.8	1.8	7.0	56.1	63.1
Chinese Taipei	2019	723	69.3	6.0	13.9	68.7	10.5	0.7	0.2	64.1	74.2
	2023	1102	64.3	7.7	13.5	63.9	14.3	0.2	0.4	60.5	67.7
England	2019	480	61.1	8.5	10.6	59.0	18.5	2.2	1.3	60.3	61.9
	2023	601	58.9	7.9	12.0	56.8	19.6	0.5	3.1	58.5	59.4
Finland	2019	701	82.1	3.6	2.8	80.7	11.2	1.0	0.7	86.4	77.8
	2023	858	72.6	7.2	6.5	71.8	13.3	0.2	1.0	75.5	70.1
France	2019	558	57.9	11.7	6.3	55.8	22.5	2.1	1.6	59.5	56.5
	2023	651	61.6	11.2	7.0	59.8	19.1	1.0	1.9	62.2	61.0
Georgia	2019	468	61.5	17.2	10.4	58.8	9.2	3.2	1.3	55.9	66.8
	2023	708	61.3	19.3	7.1	56.5	9.3	1.1	6.8	60.1	62.5
Hong Kong SAR	2019	468	54.9	13.6	13.4	53.3	16.9	1.3	1.6	51.4	57.7
	2023	645	65.6	7.1	11.6	63.7	14.7	0.0	2.8	59.1	71.7
Hungary	2019	655	64.3	9.6	6.2	64.1	19.7	0.4	0.0	66.9	61.9
	2023	798	60.9	7.0	10.3	60.1	21.3	0.6	0.6	67.1	55.2
Israel	2019	529	62.0	8.2	11.0	61.5	18.4	0.8	0.0	61.3	62.6
	2023	760	49.0	14.0	12.7	45.5	20.7	1.5	5.6	47.2	50.6
Italy	2019	514	78.4	8.2	5.5	76.8	7.4	0.7	1.4	77.1	79.7
	2023	670	76.7	7.4	6.5	74.6	8.7	1.1	1.7	78.8	75.0
Korea, Rep. of	2019	548	39.5	25.9	14.2	39.3	20.1	0.4	0.0	30.5	47.4
	2023	849	41.1	31.2	15.4	40.8	12.0	0.2	0.4	36.1	45.9
Lithuania	2019	546	73.2	6.1	5.0	72.2	15.3	1.3	0.0	71.3	74.7
	2023	790	71.5	6.7	9.0	71.2	12.6	0.2	0.3	72.6	70.4
Malaysia	2019	1014	60.9	10.5	11.4	59.8	16.5	0.8	0.9	64.4	57.5
	2023	1275	34.7	17.3	18.9	32.6	25.2	0.2	5.8	31.6	37.9
Norway (9)	2019	644	67.0	8.3	4.3	64.4	19.1	1.6	2.3	69.3	65.0
	2023	908	62.4	10.5	8.1	58.4	16.6	0.8	5.6	64.9	60.0
Portugal	2019	476	69.2	10.4	6.0	68.4	14.1	0.9	0.2	66.8	71.3
	2023	774	69.8	11.8	6.1	68.2	11.7	0.2	2.0	70.7	68.9
Qatar	2019	551	53.6	10.6	17.5	52.2	17.0	1.3	1.3	56.6	50.7
	2023	618	56.0	11.8	15.1	53.1	14.8	0.7	4.6	56.4	55.7
Singapore	2019	688	68.7	4.5	13.4	68.1	13.0	0.5	0.4	62.8	74.9
	2023	948	72.9	3.6	12.9	72.3	10.4	0.1	0.7	68.8	76.5
Sweden	2019	565	71.8	6.1	4.4	69.1	16.7	1.4	2.4	77.1	67.3
	2023	725	66.5	8.3	9.1	61.7	13.7	0.9	6.3	74.3	59.4
United Arab Emirates	2019	3201	61.2	10.0	10.7	59.5	17.0	1.9	0.8	64.6	58.0
	2023	4045	64.6	8.1	10.5	60.0	14.3	0.8	6.3	63.3	65.8
United States	2019	1231	61.3	5.9	8.2	59.5	23.4	1.1	1.9	60.8	61.8
	2023	1168	60.1	6.1	10.5	56.9	21.2	0.3	5.1	57.5	62.6
International Avg. (20)	2019	15155	63.8	10.1	9.0	62.4	16.3	1.3	1.0	63.1	64.5
	2023	19541	61.5	10.9	10.5	59.1	15.5	0.6	3.4	61.1	62.0

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing

B_SD1_15 SE72363: How the Sun produces light - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	52.4	11.9	13.6	50.8	20.7	1.6	1.3	55.8	49.4
	2023	1036	54.4	10.9	11.6	50.7	20.0	0.7	6.1	51.0	57.6
Dubai, UAE	2019	827	72.1	5.7	6.7	70.4	14.8	1.5	0.9	74.0	70.1
	2023	1178	74.3	5.4	6.4	68.9	12.0	1.1	6.1	73.1	75.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SD2_01 SE62099: Cell development in young animals - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	58.5	20.1	57.4	14.9	5.7	1.9	0.0	56.7	59.8
	2023	644	48.8	22.5	48.2	21.0	7.2	1.1	0.0	46.8	50.6
Chinese Taipei	2019	706	71.8	7.6	71.6	18.1	2.5	0.3	0.0	69.2	74.3
	2023	1110	79.4	5.5	79.4	12.6	2.4	0.0	0.0	76.4	82.3
England	2019	486	53.7	15.7	53.4	24.6	5.8	0.4	0.0	51.4	56.2
	2023	620	52.8	14.3	52.7	26.0	6.7	0.3	0.0	49.8	55.8
Finland	2019	681	62.0	7.2	61.7	22.6	8.1	0.3	0.1	66.1	58.1
	2023	862	54.2	10.2	53.8	25.6	9.7	0.4	0.3	54.5	54.0
France	2019	545	54.5	18.2	54.3	17.5	9.7	0.2	0.2	55.1	53.9
	2023	649	48.6	19.8	48.4	21.1	10.4	0.3	0.0	50.0	47.0
Georgia	2019	472	43.4	24.1	43.0	25.2	6.8	0.4	0.5	40.0	46.3
	2023	712	33.9	27.1	33.6	29.4	9.0	0.6	0.2	33.3	34.4
Hong Kong SAR	2019	467	67.3	12.9	67.3	16.7	3.0	0.0	0.0	66.5	68.1
	2023	651	65.8	11.9	65.5	18.7	3.5	0.4	0.0	60.6	69.9
Hungary	2019	653	55.1	13.9	55.1	24.9	6.1	0.1	0.0	51.1	58.9
	2023	798	56.6	14.5	56.6	24.0	4.9	0.0	0.0	53.7	59.6
Israel	2019	533	56.9	18.2	56.3	19.2	5.2	0.8	0.4	57.2	56.6
	2023	755	45.7	27.8	45.2	18.4	7.7	0.7	0.3	42.5	48.8
Italy	2019	512	57.2	8.6	57.0	29.2	4.9	0.4	0.0	58.1	56.3
	2023	672	57.5	9.5	57.5	28.3	4.6	0.0	0.0	52.1	63.3
Korea, Rep. of	2019	560	57.6	10.2	57.4	26.1	5.9	0.4	0.0	52.2	62.7
	2023	860	50.9	10.6	50.8	31.7	6.7	0.1	0.0	45.3	56.0
Lithuania	2019	555	51.8	13.8	51.8	28.5	5.8	0.0	0.0	53.1	50.3
	2023	785	48.1	11.0	48.1	34.1	6.8	0.0	0.0	44.6	51.7
Malaysia	2019	1005	46.3	22.6	46.1	19.6	11.4	0.4	0.0	47.5	45.1
	2023	1255	36.6	24.5	36.5	23.2	15.7	0.0	0.1	35.7	37.4
Norway (9)	2019	644	57.6	9.3	56.9	25.6	7.0	1.1	0.1	53.8	61.1
	2023	903	55.2	8.7	55.0	25.0	11.0	0.3	0.1	54.2	56.0
Portugal	2019	485	51.2	17.6	51.1	24.7	6.5	0.1	0.0	50.3	52.1
	2023	796	47.7	16.4	47.5	28.3	7.4	0.4	0.0	47.2	48.1
Qatar	2019	557	42.7	29.8	42.4	18.0	9.0	0.7	0.0	44.6	40.7
	2023	632	38.3	30.1	38.1	23.5	7.7	0.6	0.0	37.7	39.0
Singapore	2019	690	84.5	7.5	84.5	7.2	0.8	0.0	0.0	84.2	84.7
	2023	964	75.7	9.1	75.6	13.5	1.6	0.1	0.1	74.8	76.5
Sweden	2019	574	64.2	7.4	63.6	21.7	6.3	0.9	0.1	62.3	66.1
	2023	744	57.0	8.6	56.9	26.2	8.1	0.1	0.1	53.4	60.5
United Arab Emirates	2019	3159	51.8	21.4	51.3	18.0	8.4	0.8	0.1	53.0	50.6
	2023	4040	52.5	18.6	52.2	22.2	6.4	0.4	0.2	48.7	56.1
United States	2019	1222	61.2	16.4	60.9	16.1	6.1	0.3	0.1	61.5	60.7
	2023	1159	53.4	18.0	53.3	21.2	7.3	0.1	0.1	52.5	54.2
International Avg. (20)	2019	15094	57.5	15.1	57.1	20.9	6.3	0.5	0.1	56.7	58.1
	2023	19611	52.9	15.9	52.7	23.7	7.2	0.3	0.1	50.7	55.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SD2_01 SE62099: Cell development in young animals - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1162	43.6	22.5	43.2	21.6	11.8	0.8	0.0	42.5	44.5
	2023	1032	43.1	18.8	42.9	27.9	10.0	0.2	0.2	33.6	52.2
Dubai, UAE	2019	808	63.9	15.0	63.7	15.0	5.9	0.3	0.1	64.5	63.4
	2023	1181	65.1	11.8	64.7	19.4	3.5	0.3	0.2	62.8	67.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing
B_SD2_02 SE62095: Fill in organ names - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	34.1	48.0	28.6	17.9	5.5	0.0	33.6	34.0
	2023	644	25.5	56.1	21.2	12.2	10.5	0.0	25.5	25.4
Chinese Taipei	2019	706	54.6	30.7	28.4	39.9	0.9	0.0	53.7	55.6
	2023	1110	54.4	30.7	29.4	39.4	0.5	0.0	53.1	55.5
England	2019	486	33.5	51.3	24.5	19.7	4.5	0.0	32.3	34.8
	2023	620	41.1	44.6	23.9	27.6	3.8	0.0	42.2	40.1
Finland	2019	681	26.9	55.8	30.9	10.7	2.4	0.1	28.1	25.7
	2023	862	22.8	60.6	30.3	7.2	1.7	0.3	23.8	21.9
France	2019	545	26.2	59.1	24.6	13.1	3.0	0.2	26.3	26.1
	2023	649	14.5	76.2	14.4	6.9	2.5	0.0	13.5	15.5
Georgia	2019	472	32.9	41.7	43.9	9.3	4.6	0.5	29.9	35.5
	2023	712	43.8	35.2	37.6	23.3	3.7	0.2	45.9	41.9
Hong Kong SAR	2019	467	25.2	59.1	16.4	14.4	10.0	0.0	18.0	31.4
	2023	650	28.3	57.4	19.7	16.7	6.2	0.0	26.7	29.6
Hungary	2019	653	49.3	34.4	32.4	33.0	0.1	0.0	46.6	51.9
	2023	798	38.3	44.9	32.4	21.8	0.9	0.0	37.3	39.4
Israel	2019	533	13.8	75.1	13.8	6.3	4.4	0.4	11.9	15.8
	2023	754	8.6	79.7	12.2	2.0	5.8	0.3	8.0	9.2
Italy	2019	512	19.1	67.2	23.4	6.9	2.3	0.1	20.9	17.4
	2023	672	13.5	74.6	18.5	3.8	3.1	0.0	12.0	15.1
Korea, Rep. of	2019	560	56.6	27.4	30.8	40.4	1.4	0.0	54.2	58.7
	2023	860	57.1	28.2	27.9	42.1	1.8	0.0	57.3	56.9
Lithuania	2019	555	35.3	45.6	36.9	16.4	1.1	0.0	35.9	34.6
	2023	785	27.7	56.3	29.8	12.4	1.5	0.0	29.7	25.6
Malaysia	2019	1005	28.6	58.6	23.2	16.5	1.7	0.0	31.5	25.9
	2023	1255	35.1	51.6	25.1	22.2	1.0	0.1	38.9	31.1
Norway (9)	2019	644	20.8	63.7	24.7	7.6	3.9	0.1	23.3	18.6
	2023	903	15.3	70.5	21.1	4.1	4.2	0.1	17.2	13.8
Portugal	2019	485	35.6	50.1	27.7	21.5	0.6	0.1	34.2	37.0
	2023	796	27.8	57.2	26.1	14.1	2.6	0.0	26.2	29.4
Qatar	2019	557	57.4	30.0	24.4	44.7	0.7	0.2	61.5	53.0
	2023	632	54.2	34.0	22.6	42.3	0.8	0.3	58.2	49.9
Singapore	2019	690	86.7	4.6	17.3	77.6	0.4	0.0	86.2	87.1
	2023	964	91.1	3.4	10.9	85.5	0.1	0.1	90.4	91.8
Sweden	2019	574	27.8	58.6	20.8	16.2	4.4	0.1	31.2	24.2
	2023	744	27.3	58.7	26.9	13.6	0.7	0.1	25.3	29.3
United Arab Emirates	2019	3162	43.3	44.0	21.8	31.0	3.2	0.1	44.5	42.2
	2023	4040	46.2	40.3	23.5	33.0	2.9	0.2	47.0	45.5
United States	2019	1222	21.4	67.6	18.7	11.6	2.0	0.1	21.1	21.6
	2023	1159	13.0	77.3	14.8	5.2	2.5	0.1	12.0	13.9
International Avg. (20)	2019	15097	36.4	48.6	25.7	22.7	2.9	0.1	36.2	36.6
	2023	19609	34.3	51.9	23.4	21.8	2.8	0.1	34.5	34.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing

B_SD2_02 SE62095: Fill in organ names - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1163	34.6	53.2	17.3	24.0	5.4	0.0	38.6	30.9
	2023	1032	29.4	59.2	16.1	19.9	4.6	0.2	27.6	31.2
Dubai, UAE	2019	808	51.6	35.8	23.2	39.0	1.9	0.1	49.2	54.0
	2023	1181	54.9	31.2	25.3	40.8	2.4	0.2	54.6	55.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SD2_03 SE62106: Characteristics of young rabbits - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	79.5	9.8	6.1	4.3	78.2	1.4	0.1	82.6	76.6
	2023	644	69.0	12.5	10.7	7.4	68.0	1.3	0.1	71.8	66.5
Chinese Taipei	2019	706	73.0	15.5	4.6	6.7	72.7	0.5	0.0	74.1	72.0
	2023	1110	69.0	19.2	5.0	6.8	69.0	0.0	0.0	76.2	62.4
Finland	2019	681	77.0	11.0	7.9	3.9	76.6	0.4	0.1	77.6	76.5
	2023	862	67.6	18.0	9.0	5.0	67.0	0.7	0.3	71.4	64.6
France	2019	545	78.3	14.3	3.5	3.4	76.5	2.0	0.2	84.1	72.7
	2023	649	71.2	17.0	7.0	4.8	71.0	0.2	0.0	73.1	69.2
Georgia	2019	472	67.1	16.2	10.5	5.7	66.3	0.7	0.5	71.8	63.1
	2023	712	63.5	19.7	10.1	6.5	63.3	0.1	0.3	64.7	62.5
Hong Kong SAR	2019	467	66.6	16.3	9.0	8.0	66.4	0.3	0.0	70.6	63.0
	2023	651	65.1	17.7	8.4	8.7	65.0	0.2	0.0	69.8	61.4
Hungary	2019	653	81.7	8.2	6.7	3.4	81.5	0.2	0.0	88.6	75.3
	2023	798	75.7	11.3	6.8	6.2	75.7	0.0	0.0	80.7	70.2
Israel	2019	533	79.8	10.6	6.4	3.0	78.8	0.9	0.4	84.0	75.5
	2023	755	72.7	10.7	8.9	7.5	72.1	0.4	0.4	75.4	70.1
Italy	2019	512	74.3	15.4	4.4	5.8	73.9	0.4	0.1	77.5	71.3
	2023	672	67.7	18.2	5.2	8.8	67.6	0.2	0.0	72.4	62.7
Korea, Rep. of	2019	560	81.6	11.3	2.7	4.3	81.3	0.4	0.0	84.6	78.8
	2023	860	80.1	10.1	3.8	5.9	79.8	0.3	0.0	83.4	77.0
Lithuania	2019	555	87.7	6.1	2.3	3.8	86.9	0.8	0.0	89.3	85.7
	2023	785	85.5	6.9	2.7	4.9	85.5	0.1	0.0	91.2	79.6
Malaysia	2019	1005	54.7	27.5	10.6	7.2	54.7	0.0	0.0	58.8	50.9
	2023	1255	49.3	31.5	11.8	7.4	49.2	0.0	0.1	53.4	45.0
Norway (9)	2019	644	73.0	13.8	6.6	6.1	71.5	1.6	0.4	78.0	68.2
	2023	903	65.6	15.3	11.4	7.5	65.2	0.5	0.1	73.1	59.6
Portugal	2019	485	81.2	6.8	5.8	6.1	80.3	0.9	0.1	84.8	77.4
	2023	796	69.6	11.8	9.8	8.6	69.3	0.5	0.0	70.1	69.1
Qatar	2019	557	58.5	22.8	11.6	6.7	57.9	0.8	0.2	66.1	50.6
	2023	632	64.8	19.3	10.7	5.1	64.5	0.1	0.3	72.2	57.1
Singapore	2019	690	85.6	9.5	3.2	1.7	85.3	0.4	0.0	91.4	80.4
	2023	964	82.2	10.8	5.1	1.8	82.2	0.0	0.1	85.1	79.6
Sweden	2019	574	79.7	8.1	5.4	6.4	78.3	1.6	0.1	83.9	75.4
	2023	744	70.6	14.1	7.8	7.3	69.9	0.8	0.1	74.3	66.8
United Arab Emirates	2019	3160	57.5	20.3	11.8	9.8	56.8	1.1	0.1	63.7	52.0
	2023	4041	63.0	19.7	9.8	7.2	62.5	0.4	0.3	66.0	60.1
United States	2019	1222	67.4	17.6	6.3	8.2	66.6	1.1	0.2	73.8	61.1
	2023	1159	61.1	21.5	8.8	8.4	60.8	0.3	0.2	65.9	56.6
International Avg. (19)	2019	14609	73.9	13.7	6.6	5.5	73.2	0.8	0.1	78.2	69.8
	2023	18992	69.1	16.1	8.0	6.6	68.8	0.3	0.1	73.2	65.3
Abu Dhabi, UAE	2019	1163	48.5	20.1	18.0	12.6	47.8	1.4	0.1	53.9	43.8
	2023	1032	51.2	21.4	16.4	10.7	50.9	0.3	0.2	51.1	51.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing
B_SD2_03 SE62106: Characteristics of young rabbits - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Dubai, UAE	2019	808	69.8	16.5	5.9	7.6	69.6	0.2	0.1	76.8	63.2
	2023	1181	75.0	15.0	5.2	4.6	74.4	0.5	0.3	78.2	71.9

Science: Biology / Reasoning
B_SD2_04 SE62064: Bones of a bird are hollow - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	63.6	29.6	51.7	18.5	0.3	65.4	61.9
	2023	644	50.6	39.8	40.8	19.2	0.1	50.5	50.8
Chinese Taipei	2019	706	80.8	18.8	79.0	2.2	0.0	76.6	84.9
	2023	1110	76.9	22.7	75.7	1.6	0.0	75.6	78.2
England	2019	486	77.3	20.3	69.1	10.3	0.2	73.1	81.7
	2023	620	83.1	15.6	77.0	7.3	0.1	81.8	84.4
Finland	2019	681	86.9	12.6	83.3	3.9	0.1	88.2	85.7
	2023	862	80.4	18.8	77.0	3.9	0.3	80.6	80.2
France	2019	545	77.8	19.6	68.7	11.2	0.4	76.5	79.0
	2023	649	70.8	25.9	62.7	11.5	0.0	67.0	74.8
Georgia	2019	471	70.4	19.0	45.3	35.2	0.5	61.0	78.2
	2023	712	58.5	30.3	42.6	26.8	0.3	60.4	56.9
Hong Kong SAR	2019	467	64.5	30.3	55.0	14.7	0.0	64.6	64.4
	2023	651	63.5	32.7	56.8	10.5	0.0	60.7	65.9
Hungary	2019	653	85.0	14.1	79.7	6.2	0.0	82.0	87.7
	2023	797	82.4	16.5	77.6	5.9	0.0	82.2	82.7
Israel	2019	533	88.1	10.5	77.1	12.1	0.4	88.1	88.0
	2023	754	63.0	32.0	54.6	12.9	0.5	62.3	63.6
Italy	2019	512	81.3	16.2	70.1	13.6	0.1	86.3	76.8
	2023	672	77.0	19.8	66.1	14.2	0.0	79.9	74.1
Korea, Rep. of	2019	560	81.7	17.4	77.3	5.3	0.0	79.2	83.9
	2023	860	74.3	24.6	71.3	4.1	0.0	72.0	76.4
Lithuania	2019	555	90.2	8.9	81.8	9.3	0.0	90.5	89.9
	2023	785	76.8	20.6	68.3	11.1	0.0	77.8	75.7
Malaysia	2019	1005	33.8	62.0	31.7	6.3	0.0	35.2	32.6
	2023	1255	36.9	60.3	35.2	4.4	0.1	36.0	37.8
Norway (9)	2019	644	54.0	36.6	43.0	20.0	0.4	51.7	56.1
	2023	903	38.1	51.2	31.5	17.0	0.2	39.0	37.4
Portugal	2019	485	83.0	15.5	75.5	8.9	0.1	79.3	86.9
	2023	796	69.2	27.0	60.7	12.2	0.2	66.3	71.8
Qatar	2019	557	62.9	32.9	55.7	11.0	0.4	64.0	61.6
	2023	632	62.8	35.3	59.6	4.8	0.3	63.4	62.2
Singapore	2019	690	84.5	15.2	82.9	1.9	0.0	82.7	86.1
	2023	964	83.1	16.7	81.9	1.3	0.1	78.8	86.9
Sweden	2019	574	70.0	26.8	62.6	10.4	0.2	69.7	70.2
	2023	744	63.9	32.9	58.3	8.7	0.1	64.7	63.2
United Arab Emirates	2019	3163	61.9	34.6	56.3	8.9	0.1	63.9	60.0
	2023	4040	51.7	45.0	48.2	6.4	0.4	50.3	53.1
United States	2019	1222	81.8	17.7	79.4	2.6	0.3	83.7	79.8
	2023	1159	76.2	23.4	74.9	1.4	0.4	74.0	78.3
International Avg. (20)	2019	15097	74.0	22.9	66.3	10.6	0.2	73.1	74.8
	2023	19609	67.0	29.6	61.0	9.2	0.2	66.2	67.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Reasoning

B_SD2_04 SE62064: Bones of a bird are hollow - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1162	48.6	46.0	43.5	10.5	0.1	50.5	46.7
	2023	1031	38.0	57.2	35.1	7.4	0.3	35.5	40.4
Dubai, UAE	2019	808	80.0	18.9	75.7	5.2	0.1	79.7	80.3
	2023	1181	65.7	32.1	61.5	5.9	0.5	63.8	67.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SD2_05 SE62132: Water and tea graphs - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	54.5	17.5	10.8	52.9	15.8	2.4	0.6	51.3	57.1
	2023	644	48.5	19.0	11.3	47.2	20.0	2.4	0.1	52.7	44.7
Chinese Taipei	2019	706	78.1	8.1	4.7	77.8	9.1	0.4	0.0	80.1	76.1
	2023	1110	81.8	6.3	2.3	81.6	9.6	0.2	0.0	84.5	79.2
England	2019	486	65.8	15.9	6.3	64.1	11.1	2.4	0.2	65.8	65.7
	2023	620	67.0	16.4	4.1	65.1	11.5	2.8	0.1	68.2	65.9
Finland	2019	681	78.1	7.6	5.7	77.5	8.5	0.6	0.1	79.9	76.4
	2023	862	71.2	9.7	7.2	69.9	11.4	1.5	0.3	74.4	68.5
France	2019	545	65.9	14.2	5.6	64.2	13.5	2.1	0.4	64.5	67.2
	2023	649	64.5	13.2	7.2	63.7	14.7	1.2	0.0	62.4	66.7
Georgia	2019	472	45.4	18.0	15.6	42.8	17.9	5.1	0.6	37.1	52.3
	2023	712	43.7	16.4	15.3	42.6	23.3	1.9	0.5	45.2	42.4
Hong Kong SAR	2019	467	68.1	10.5	8.2	68.1	13.1	0.0	0.0	69.7	66.8
	2023	651	72.1	8.5	5.5	71.6	13.8	0.6	0.0	74.7	69.9
Hungary	2019	653	69.6	7.9	6.3	69.5	16.2	0.1	0.0	69.4	69.7
	2023	798	73.7	6.8	5.7	73.3	13.7	0.6	0.0	74.7	72.6
Israel	2019	533	55.9	12.4	9.8	55.3	21.4	0.7	0.4	52.8	59.2
	2023	755	53.5	12.3	12.8	52.9	20.9	0.6	0.5	53.4	53.6
Italy	2019	512	60.0	15.3	9.5	58.3	14.0	2.8	0.1	61.9	58.3
	2023	672	58.8	11.5	9.6	58.2	19.7	1.1	0.0	59.0	58.6
Korea, Rep. of	2019	560	66.4	12.8	6.3	66.2	14.4	0.3	0.0	67.1	65.7
	2023	860	73.9	10.8	4.0	73.6	11.3	0.3	0.0	71.1	76.4
Lithuania	2019	555	73.6	8.6	6.2	72.9	11.3	0.9	0.0	74.6	72.5
	2023	785	76.2	8.6	5.8	75.7	9.2	0.7	0.0	78.2	74.2
Malaysia	2019	1005	57.9	20.6	10.1	57.8	11.5	0.1	0.0	56.7	58.9
	2023	1255	51.3	19.8	12.4	51.0	16.3	0.2	0.2	48.6	54.0
Norway (9)	2019	644	72.3	10.2	5.9	70.9	10.9	1.6	0.4	74.5	70.3
	2023	903	71.3	8.7	5.3	69.1	13.7	2.6	0.5	73.6	69.5
Portugal	2019	485	66.0	16.2	6.3	65.4	11.3	0.8	0.1	65.0	67.0
	2023	796	63.6	15.4	7.7	63.3	13.2	0.3	0.2	64.2	63.0
Qatar	2019	557	45.7	20.5	15.2	44.9	17.6	1.0	0.8	46.1	45.3
	2023	632	50.4	20.3	10.4	49.7	18.3	1.0	0.3	50.7	50.0
Singapore	2019	690	82.7	6.0	3.3	82.4	7.9	0.4	0.0	80.3	84.8
	2023	964	84.6	5.2	1.8	84.4	8.4	0.1	0.1	85.6	83.7
Sweden	2019	574	70.7	9.4	5.1	69.1	14.2	2.0	0.3	72.1	69.4
	2023	744	65.3	13.0	5.7	64.3	15.4	1.4	0.1	67.0	63.7
United Arab Emirates	2019	3161	50.3	17.9	14.6	49.4	16.3	1.6	0.2	50.3	50.2
	2023	4041	54.5	19.8	9.2	53.8	15.9	0.8	0.6	52.8	56.2
United States	2019	1222	60.2	15.4	11.4	59.3	12.4	1.1	0.3	61.4	58.9
	2023	1159	60.3	14.6	7.2	60.0	17.7	0.1	0.4	62.6	58.3
International Avg. (20)	2019	15096	64.4	13.2	8.4	63.4	13.4	1.3	0.2	64.0	64.6
	2023	19612	64.3	12.8	7.5	63.6	14.9	1.0	0.2	65.2	63.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SD2_05 SE62132: Water and tea graphs - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1163	44.1	19.9	19.5	43.5	15.8	1.2	0.2	44.5	43.6
	2023	1032	49.7	22.6	9.6	49.2	17.6	0.5	0.6	46.6	52.7
Dubai, UAE	2019	808	63.3	14.8	5.9	63.0	15.8	0.4	0.1	61.0	65.5
	2023	1181	66.0	13.1	5.4	65.3	15.2	0.4	0.5	63.4	68.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Reasoning
B_SD2_06 SE62163: Truck sank into the mud - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	5.7	89.2	5.4	4.8	0.6	4.0	7.3
	2023	644	3.7	89.3	3.4	7.1	0.1	3.3	4.1
Chinese Taipei	2019	706	18.0	79.7	17.5	2.8	0.0	17.6	18.4
	2023	1110	17.0	82.0	16.8	1.2	0.0	17.2	16.8
England	2019	486	17.9	77.8	17.0	5.1	0.2	16.6	19.3
	2023	620	17.8	78.9	17.1	4.0	0.1	17.2	18.4
Finland	2019	681	33.2	65.8	32.7	1.4	0.1	31.3	35.0
	2023	862	24.8	73.0	24.1	2.5	0.3	24.3	25.3
France	2019	545	5.9	90.6	5.7	3.3	0.4	5.8	6.1
	2023	649	5.3	91.9	5.2	3.0	0.0	3.6	7.1
Georgia	2019	472	5.8	86.3	5.3	7.8	0.6	4.3	7.0
	2023	712	13.5	79.2	12.4	7.9	0.5	12.0	14.8
Hong Kong SAR	2019	467	12.4	78.7	11.1	10.2	0.0	12.4	12.3
	2023	651	11.7	81.1	10.7	8.2	0.0	7.4	15.2
Hungary	2019	653	29.9	69.5	29.6	0.8	0.0	25.6	33.9
	2023	798	29.6	69.3	29.1	1.6	0.0	25.5	34.0
Israel	2019	533	12.4	82.3	11.6	5.7	0.4	7.4	17.6
	2023	754	7.2	86.0	6.7	6.6	0.7	5.5	8.8
Italy	2019	512	11.5	85.0	11.1	3.4	0.5	11.9	11.2
	2023	672	5.9	91.4	5.7	2.8	0.1	3.3	8.7
Korea, Rep. of	2019	560	17.6	79.7	17.0	3.3	0.0	12.9	22.1
	2023	860	18.1	79.2	17.5	3.3	0.0	15.6	20.4
Lithuania	2019	555	14.5	83.0	14.0	3.0	0.0	13.3	15.8
	2023	785	16.2	81.6	15.8	2.7	0.0	16.3	16.2
Malaysia	2019	1005	6.5	91.3	6.4	2.4	0.0	6.3	6.7
	2023	1255	2.0	95.7	2.0	2.1	0.2	1.5	2.6
Norway (9)	2019	644	19.1	76.1	18.0	5.5	0.4	17.0	21.1
	2023	903	17.9	78.4	17.1	4.0	0.5	14.6	20.6
Portugal	2019	485	3.1	94.9	3.0	2.0	0.1	4.5	1.6
	2023	796	4.8	91.2	4.6	4.0	0.2	4.1	5.4
Qatar	2019	557	9.6	84.6	9.0	5.7	0.8	9.0	10.2
	2023	632	7.7	88.6	7.3	3.4	0.6	6.0	9.5
Singapore	2019	690	47.2	52.5	46.9	0.6	0.0	43.9	50.2
	2023	964	53.7	46.1	53.4	0.5	0.1	53.9	53.5
Sweden	2019	574	31.4	66.3	30.4	3.1	0.3	31.2	31.8
	2023	744	27.8	69.5	26.8	3.6	0.1	22.1	33.6
United Arab Emirates	2019	3166	14.0	80.6	13.2	6.0	0.2	14.1	14.0
	2023	4041	16.1	80.3	15.4	3.7	0.6	15.4	16.7
United States	2019	1222	12.8	84.8	12.5	2.3	0.5	12.7	13.0
	2023	1159	11.9	86.7	11.7	1.2	0.4	8.2	15.2
International Avg. (20)	2019	15101	16.4	79.9	15.9	4.0	0.3	15.1	17.7
	2023	19611	15.6	81.0	15.1	3.7	0.2	13.8	17.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Reasoning

B_SD2_06 SE62163: Truck sank into the mud - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1165	8.6	84.3	7.9	7.6	0.2	8.4	8.8
	2023	1032	9.8	85.2	9.2	5.0	0.6	7.6	11.8
Dubai, UAE	2019	808	25.0	72.5	24.1	3.3	0.1	24.3	25.7
	2023	1181	26.4	71.4	25.6	2.4	0.5	26.2	26.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Reasoning
B_SD2_07 SE62153: Flashlight on blue ball - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	37.2	14.6	17.8	36.0	28.4	2.5	0.7	35.6	38.9
	2023	644	34.0	17.1	23.6	33.1	23.8	2.1	0.3	33.5	34.4
Chinese Taipei	2019	705	66.1	9.5	9.5	65.9	14.8	0.3	0.0	65.0	67.2
	2023	1110	63.8	8.9	11.0	63.7	16.3	0.1	0.0	62.0	65.5
England	2019	486	52.1	15.7	16.9	50.5	13.9	2.8	0.2	52.1	52.0
	2023	620	52.2	14.8	15.3	51.8	17.4	0.6	0.1	45.3	58.9
Finland	2019	681	65.7	12.6	7.3	65.3	14.2	0.5	0.1	63.9	67.4
	2023	862	60.4	13.1	9.2	60.0	16.9	0.5	0.3	59.3	61.4
France	2019	545	43.7	16.8	19.9	42.8	18.4	1.6	0.4	46.0	41.5
	2023	649	34.7	20.1	24.4	34.4	20.2	1.0	0.0	33.1	36.4
Georgia	2019	472	50.8	17.6	13.8	49.5	16.5	2.1	0.6	50.3	51.3
	2023	712	47.8	17.8	12.7	47.2	20.9	0.7	0.7	44.0	51.1
Hong Kong SAR	2019	467	56.3	12.5	11.3	55.3	19.1	1.7	0.2	55.6	56.9
	2023	651	52.6	12.5	15.5	52.5	19.2	0.2	0.0	50.7	54.2
Hungary	2019	653	52.5	12.7	12.9	52.5	21.9	0.0	0.0	54.4	50.8
	2023	798	51.8	11.0	14.6	51.8	22.7	0.0	0.0	50.0	53.8
Israel	2019	533	48.7	8.8	19.0	47.9	22.8	1.2	0.4	43.1	54.4
	2023	755	46.4	10.8	22.2	45.8	19.8	0.7	0.7	41.7	51.0
Italy	2019	512	49.9	15.1	11.7	48.5	21.8	2.1	0.7	54.2	46.2
	2023	672	40.4	18.0	21.6	40.2	19.7	0.5	0.1	41.3	39.5
Korea, Rep. of	2019	560	62.9	17.2	7.8	62.7	11.9	0.5	0.0	62.4	63.5
	2023	860	66.1	17.8	7.9	66.0	8.2	0.2	0.0	65.6	66.6
Lithuania	2019	555	49.7	13.0	23.9	49.2	12.9	1.0	0.0	46.7	53.2
	2023	785	50.8	12.6	23.6	50.7	12.8	0.3	0.0	53.2	48.3
Malaysia	2019	1005	37.1	11.4	29.0	36.7	22.0	0.9	0.0	36.8	37.4
	2023	1255	35.1	15.2	28.4	34.9	21.0	0.3	0.2	33.2	37.0
Norway (9)	2019	644	48.1	14.5	15.8	46.6	20.1	2.4	0.6	43.4	52.5
	2023	903	44.5	14.9	17.8	43.8	21.9	1.1	0.6	43.2	45.6
Portugal	2019	485	44.4	15.7	11.9	44.2	27.7	0.4	0.1	43.7	45.2
	2023	796	47.2	17.3	16.1	47.0	19.3	0.2	0.2	47.7	46.7
Qatar	2019	557	40.4	16.3	13.9	39.6	28.2	1.3	0.8	41.3	39.5
	2023	632	39.7	18.5	15.6	39.4	25.6	0.3	0.6	38.2	41.3
Singapore	2019	690	66.7	5.7	8.6	66.6	18.9	0.1	0.0	65.7	67.6
	2023	964	56.4	7.2	7.4	56.3	29.0	0.1	0.1	50.0	62.2
Sweden	2019	574	52.4	13.4	10.5	51.5	22.9	1.4	0.4	52.3	52.3
	2023	744	51.9	15.2	14.1	51.4	18.3	0.7	0.3	52.4	51.5
United Arab Emirates	2019	3160	47.1	13.4	18.1	46.5	20.9	0.9	0.3	44.8	49.1
	2023	4041	47.7	15.2	17.1	46.8	19.1	0.8	1.0	45.1	50.1
United States	2019	1222	52.9	11.1	13.9	51.8	21.2	1.0	1.0	48.8	57.0
	2023	1159	49.7	15.2	18.5	49.2	16.1	0.4	0.6	46.4	52.8
International Avg. (20)	2019	15094	51.2	13.4	14.7	50.5	19.9	1.2	0.3	50.3	52.2
	2023	19612	48.7	14.7	16.8	48.3	19.4	0.5	0.3	46.8	50.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Reasoning

B_SD2_07 SE62153: Flashlight on blue ball - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1161	44.8	13.6	20.1	44.2	20.9	0.8	0.3	44.4	44.9
	2023	1032	44.8	14.2	17.7	44.0	22.2	0.7	1.1	42.6	46.9
Dubai, UAE	2019	808	54.9	13.7	12.6	54.5	18.5	0.6	0.1	52.2	57.6
	2023	1181	58.2	11.4	13.0	57.0	16.6	1.1	1.0	53.9	62.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Knowing
B_SD2_08 SE62018: Element, compound, mixture (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	6.4	87.4	6.9	2.7	2.2	0.8	6.0	6.7
	2023	644	5.5	90.0	5.2	2.8	1.4	0.6	5.7	5.5
Chinese Taipei	2019	706	49.4	33.8	33.5	32.7	0.1	0.0	49.3	49.6
	2023	1109	49.6	36.7	27.2	35.9	0.1	0.0	47.5	51.6
England	2019	486	21.1	70.7	12.7	14.2	1.9	0.5	19.6	22.8
	2023	620	17.6	74.8	14.3	10.4	0.5	0.1	16.7	18.5
Finland	2019	681	14.4	78.4	13.8	7.4	0.3	0.1	12.8	15.8
	2023	862	12.9	81.4	9.8	7.9	0.6	0.3	11.7	13.9
France	2019	545	3.3	93.2	4.1	1.2	1.0	0.4	2.7	3.8
	2023	649	3.6	94.3	3.8	1.7	0.2	0.0	3.5	3.7
Georgia	2019	471	25.6	62.2	19.9	14.9	2.2	0.8	24.0	27.0
	2023	712	23.0	66.7	17.3	13.8	1.2	1.0	22.5	23.4
Hong Kong SAR	2019	467	17.0	76.8	11.2	11.3	0.6	0.2	13.7	20.0
	2023	651	19.8	73.3	13.0	13.2	0.4	0.1	13.9	24.5
Hungary	2019	653	31.7	57.1	21.9	20.6	0.4	0.0	29.3	33.9
	2023	798	27.2	63.3	18.8	17.8	0.0	0.0	27.2	27.3
Israel	2019	533	27.9	62.4	18.4	18.4	0.4	0.4	29.8	25.8
	2023	755	16.3	75.7	13.8	9.2	0.4	1.0	15.4	17.1
Italy	2019	512	9.8	85.4	6.0	6.6	1.3	0.7	7.2	12.1
	2023	672	11.5	84.7	6.5	8.2	0.5	0.1	10.6	12.5
Korea, Rep. of	2019	560	15.0	78.3	13.3	8.3	0.0	0.0	14.1	15.9
	2023	860	15.0	76.3	16.9	6.5	0.3	0.0	11.6	18.1
Lithuania	2019	555	17.6	72.9	17.8	8.6	0.7	0.0	16.3	19.2
	2023	785	18.1	74.3	15.1	10.6	0.0	0.0	17.8	18.5
Malaysia	2019	1005	6.5	90.4	5.8	3.6	0.1	0.0	4.9	8.0
	2023	1255	8.5	87.1	7.9	4.6	0.1	0.5	8.1	9.0
Norway (9)	2019	644	11.9	80.8	9.1	6.9	2.5	0.8	10.6	13.0
	2023	903	12.2	81.5	9.6	7.2	1.2	0.6	10.6	13.5
Portugal	2019	485	7.6	88.8	6.7	4.2	0.2	0.1	3.7	11.5
	2023	796	6.0	91.5	4.4	3.8	0.1	0.2	6.0	6.0
Qatar	2019	557	11.3	81.8	9.5	6.3	1.3	1.2	11.1	11.6
	2023	632	18.3	73.6	14.5	10.9	0.0	1.0	20.6	15.9
Singapore	2019	690	36.5	52.6	21.7	25.6	0.1	0.0	33.1	39.5
	2023	964	41.3	47.6	22.0	30.3	0.0	0.1	38.3	44.1
Sweden	2019	574	10.7	82.8	9.5	5.7	1.6	0.4	9.2	12.2
	2023	744	10.2	83.7	10.4	4.9	0.7	0.3	8.7	11.8
United Arab Emirates	2019	3158	24.8	67.6	13.4	17.8	0.9	0.3	24.0	25.5
	2023	4041	29.8	62.6	12.9	22.9	0.4	1.2	29.3	30.4
United States	2019	1222	13.9	79.8	9.7	8.8	0.6	1.1	13.5	14.4
	2023	1159	9.3	86.1	7.6	5.4	0.1	0.7	6.4	12.1
International Avg. (20)	2019	15092	18.1	74.2	13.2	11.3	0.9	0.4	16.7	19.4
	2023	19611	17.8	75.3	12.6	11.4	0.4	0.4	16.6	18.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Knowing

B_SD2_08 SE62018: Element, Compound, mixture (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1160	17.3	76.5	10.7	11.7	0.7	0.3	15.1	19.3
	2023	1032	19.5	73.8	10.7	13.8	0.6	1.1	18.5	20.4
Dubai, UAE	2019	808	35.6	54.8	18.0	26.3	0.6	0.2	34.9	36.3
	2023	1181	38.9	53.4	13.5	31.6	0.3	1.3	35.8	41.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SD2_09 SE62143: Heating water in test tube - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	2.3	70.3	1.6	27.2	0.9	2.5	2.1
	2023	644	6.0	71.3	4.5	23.4	0.8	5.0	6.8
Chinese Taipei	2019	705	19.6	74.1	18.1	7.8	0.0	19.3	19.9
	2023	1110	18.1	80.1	17.7	2.2	0.0	14.9	21.2
England	2019	486	5.9	76.9	4.8	17.8	0.5	3.6	8.4
	2023	620	9.4	77.6	8.0	14.3	0.1	7.8	11.0
Finland	2019	681	15.8	73.6	13.8	12.5	0.1	12.6	18.7
	2023	862	12.4	79.9	11.3	8.5	0.3	8.1	15.8
France	2019	545	4.4	70.8	3.2	25.3	0.6	1.7	7.2
	2023	649	5.9	79.4	5.0	15.6	0.0	3.7	8.3
Georgia	2019	472	11.6	51.1	6.7	41.3	0.9	11.5	11.8
	2023	712	11.5	60.9	7.9	30.1	1.1	5.6	16.0
Hong Kong SAR	2019	467	18.2	67.5	15.0	17.3	0.2	21.8	14.7
	2023	651	13.7	76.2	12.1	11.6	0.1	11.5	15.6
Hungary	2019	653	5.2	81.3	4.5	14.2	0.0	3.7	6.6
	2023	798	12.9	76.6	11.3	12.0	0.0	8.9	16.9
Israel	2019	533	8.5	71.6	6.7	21.4	0.4	7.9	9.1
	2023	754	2.5	77.9	2.0	18.9	1.1	1.9	3.2
Italy	2019	512	5.0	72.0	3.8	23.5	0.7	4.6	5.4
	2023	672	5.0	76.0	4.0	19.9	0.1	4.1	6.1
Korea, Rep. of	2019	560	22.2	70.8	20.2	9.0	0.0	21.3	23.1
	2023	860	15.3	77.9	14.1	8.0	0.0	15.1	15.5
Lithuania	2019	555	13.7	71.8	11.4	16.8	0.0	11.4	16.5
	2023	785	13.7	72.9	11.6	15.5	0.0	11.6	15.8
Malaysia	2019	1005	11.9	83.4	11.3	5.3	0.1	14.1	9.9
	2023	1255	4.1	91.7	4.0	3.6	0.7	3.8	4.5
Norway (9)	2019	644	20.7	57.6	15.0	26.5	1.0	15.0	25.3
	2023	902	17.3	68.3	14.3	16.6	0.8	13.5	20.2
Portugal	2019	485	4.4	69.4	3.2	27.3	0.1	4.6	4.1
	2023	796	4.3	75.2	3.4	21.2	0.3	2.8	5.7
Qatar	2019	557	3.7	79.2	3.1	16.6	1.2	4.5	2.8
	2023	631	3.3	87.4	3.0	8.6	1.0	3.5	3.1
Singapore	2019	690	26.9	70.4	26.0	3.6	0.0	24.8	28.8
	2023	964	35.6	63.5	35.2	1.3	0.1	35.6	35.7
Sweden	2019	574	21.3	62.6	17.0	20.1	0.4	18.8	24.0
	2023	744	18.4	69.2	15.6	14.7	0.5	13.3	23.2
United Arab Emirates	2019	3167	9.1	78.0	7.8	13.8	0.4	7.3	10.8
	2023	4036	4.6	86.7	4.1	7.8	1.4	5.6	3.6
United States	2019	1222	11.3	83.9	10.7	4.1	1.3	10.2	12.5
	2023	1159	13.5	82.8	12.9	3.6	0.7	13.7	13.3
International Avg. (20)	2019	15101	12.1	71.8	10.2	17.6	0.4	11.1	13.1
	2023	19604	11.4	76.6	10.1	12.9	0.4	9.5	13.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SD2_09 SE62143: Heating water in test tube - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1165	7.8	79.0	6.7	13.8	0.5	5.8	9.9
	2023	1031	3.4	87.8	3.0	7.8	1.4	2.9	3.8
Dubai, UAE	2019	808	12.4	76.7	10.9	12.0	0.4	12.6	12.2
	2023	1180	6.7	84.7	6.1	7.7	1.5	9.1	4.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Applying
B_SD2_10 SE62276: Iron object changes color - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	9.6	83.5	8.8	6.0	1.7	10.3	8.9
	2023	644	16.2	78.8	15.3	5.0	1.0	11.5	20.6
Chinese Taipei	2019	706	58.1	41.9	58.1	0.0	0.0	59.0	57.2
	2023	1110	61.2	38.7	61.2	0.1	0.0	60.1	62.3
England	2019	486	16.7	79.1	15.9	4.6	0.5	14.8	18.7
	2023	620	26.8	72.4	26.5	0.9	0.1	24.8	28.8
Finland	2019	681	32.0	67.1	31.5	1.1	0.3	32.3	31.6
	2023	862	23.4	75.9	23.2	0.6	0.3	24.5	22.6
France	2019	545	20.5	76.5	19.8	3.0	0.7	22.1	19.0
	2023	649	17.0	82.3	16.8	0.9	0.0	17.7	16.2
Georgia	2019	471	26.1	69.5	24.6	4.6	1.3	30.4	22.2
	2023	712	30.4	68.4	29.9	0.5	1.2	28.7	32.0
Hong Kong SAR	2019	467	16.0	82.0	15.6	2.2	0.2	15.2	16.8
	2023	650	21.9	77.5	21.7	0.6	0.3	22.4	21.4
Hungary	2019	653	36.3	63.1	36.0	1.0	0.0	33.0	39.5
	2023	798	26.5	73.3	26.4	0.3	0.0	24.9	28.2
Israel	2019	533	37.1	60.9	36.0	2.7	0.4	41.3	32.9
	2023	754	22.5	75.2	21.8	1.6	1.4	21.7	23.3
Italy	2019	512	17.5	79.1	16.8	2.6	1.5	16.1	18.8
	2023	672	13.0	86.1	12.8	0.8	0.2	9.6	16.7
Korea, Rep. of	2019	560	34.7	63.9	34.0	2.1	0.0	27.5	41.5
	2023	860	21.0	78.2	20.8	1.0	0.0	14.3	27.2
Lithuania	2019	555	20.3	79.1	20.1	0.8	0.0	23.0	17.1
	2023	785	38.3	61.6	38.3	0.1	0.0	42.4	34.0
Malaysia	2019	1005	35.9	63.4	35.5	0.8	0.3	42.3	30.0
	2023	1255	17.7	81.3	17.6	0.3	0.8	18.2	17.3
Norway (9)	2019	644	14.3	81.3	13.6	4.1	1.0	15.3	13.4
	2023	903	22.1	75.6	21.4	2.1	0.8	20.0	23.8
Portugal	2019	485	28.3	71.2	28.1	0.6	0.1	30.0	26.7
	2023	796	28.4	71.1	28.2	0.4	0.3	28.2	28.6
Qatar	2019	557	37.2	60.2	35.7	2.4	1.6	42.8	31.2
	2023	632	40.6	58.6	40.1	0.2	1.2	43.4	37.6
Singapore	2019	690	47.6	52.3	47.5	0.3	0.0	45.1	49.9
	2023	964	50.1	49.8	50.0	0.1	0.1	49.6	50.6
Sweden	2019	574	22.7	72.9	21.4	4.4	1.3	23.3	22.1
	2023	744	20.6	77.7	20.1	1.4	0.8	19.6	21.5
United Arab Emirates	2019	3161	43.5	54.8	42.2	2.2	0.8	49.6	38.0
	2023	4041	47.6	51.0	46.4	1.1	1.5	50.2	45.2
United States	2019	1222	39.4	58.2	37.8	2.2	1.8	38.1	40.7
	2023	1159	39.9	59.1	39.2	0.8	0.9	39.6	40.1
International Avg. (20)	2019	15095	29.7	68.0	28.9	2.4	0.7	30.6	28.8
	2023	19610	29.3	69.6	28.9	0.9	0.5	28.6	29.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Applying
B_SD2_10 SE62276: Iron object changes color - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1162	33.7	63.8	32.4	2.9	0.8	40.0	28.1
	2023	1032	32.9	66.0	32.4	0.2	1.4	32.8	33.0
Dubai, UAE	2019	808	58.3	40.8	57.0	1.3	0.9	61.2	55.5
	2023	1181	59.6	39.1	57.8	1.3	1.8	63.2	56.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SD2_11 SE62050: Cabbage juice pH indicators - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	14.4	72.3	12.1	13.6	2.0	18.0	10.8
	2023	644	10.5	77.2	9.1	12.7	1.0	12.2	9.1
Chinese Taipei	2019	706	20.0	79.1	19.8	1.1	0.0	22.7	17.4
	2023	1110	28.0	71.9	28.0	0.1	0.0	32.0	24.3
England	2019	486	27.9	66.1	25.5	7.7	0.7	29.7	25.9
	2023	620	27.9	70.0	27.0	2.9	0.1	33.8	22.3
Finland	2019	681	26.7	70.5	25.7	3.5	0.3	33.2	20.7
	2023	862	18.9	80.0	18.6	1.0	0.4	22.9	15.5
France	2019	545	21.0	69.3	18.4	11.4	1.0	26.0	16.1
	2023	649	15.5	81.3	15.0	3.7	0.0	18.0	13.0
Georgia	2019	472	16.6	75.5	15.0	8.2	1.3	18.9	14.5
	2023	711	8.6	85.8	8.1	4.8	1.3	11.3	6.3
Hong Kong SAR	2019	467	29.5	68.2	28.5	3.1	0.2	34.3	25.2
	2023	650	30.3	68.8	29.9	0.8	0.5	34.6	26.8
Hungary	2019	653	24.5	73.7	23.9	2.4	0.0	24.5	24.5
	2023	798	17.3	82.1	17.2	0.7	0.0	19.3	15.1
Israel	2019	533	31.5	65.8	30.2	3.7	0.4	32.9	30.0
	2023	754	20.8	75.6	19.8	3.0	1.6	23.3	18.3
Italy	2019	512	14.8	77.5	13.5	7.2	1.8	18.0	12.0
	2023	672	15.7	79.8	14.9	5.1	0.2	18.9	12.3
Korea, Rep. of	2019	560	43.4	55.7	42.8	1.5	0.0	47.5	39.6
	2023	860	40.9	58.1	40.2	1.7	0.0	46.0	36.3
Lithuania	2019	555	20.8	78.1	20.5	1.4	0.0	24.1	16.9
	2023	785	21.8	77.1	21.5	1.4	0.0	26.7	16.6
Malaysia	2019	1005	10.4	87.5	10.2	1.9	0.4	11.9	9.0
	2023	1255	9.1	89.4	9.0	0.7	0.9	10.9	7.3
Norway (9)	2019	644	17.4	76.3	16.0	6.7	1.0	19.5	15.4
	2023	903	13.8	80.5	12.9	5.8	0.8	17.9	10.5
Portugal	2019	485	27.5	70.3	26.7	2.9	0.1	28.9	26.1
	2023	796	22.2	75.6	21.6	2.3	0.4	27.0	17.6
Qatar	2019	557	17.1	78.9	16.3	3.2	1.6	19.3	14.9
	2023	632	27.1	71.2	26.5	1.0	1.3	30.5	23.5
Singapore	2019	690	55.6	44.0	55.0	1.0	0.0	61.3	50.5
	2023	964	46.8	53.0	46.5	0.4	0.1	53.4	40.7
Sweden	2019	574	23.7	70.1	21.8	6.4	1.7	31.1	16.1
	2023	744	19.6	75.9	18.5	4.7	0.8	24.3	14.9
United Arab Emirates	2019	3166	18.6	77.1	17.7	4.4	0.8	20.8	16.7
	2023	4041	25.0	72.0	23.9	2.2	1.9	27.9	22.2
United States	2019	1222	32.2	64.2	30.5	3.3	2.0	36.6	27.7
	2023	1159	24.9	72.7	24.1	1.9	1.3	28.0	22.1
International Avg. (20)	2019	15101	24.7	71.0	23.5	4.7	0.8	27.9	21.5
	2023	19609	22.2	74.9	21.6	2.8	0.6	26.0	18.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SD2_11 SE62050: Cabbage juice pH indicators - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1164	13.9	81.9	13.3	3.9	0.9	13.4	14.4
	2023	1032	16.1	80.6	15.5	2.5	1.4	15.6	16.7
Dubai, UAE	2019	808	30.9	66.2	29.6	3.4	0.9	35.3	26.7
	2023	1181	36.4	61.0	35.0	1.6	2.4	41.3	31.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing
B_SD2_12 SE62205: Gases in Earth's atmosphere - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	14.6	13.9	53.6	2.7	25.1	2.1	2.6	14.8	14.6
	2023	644	13.4	13.2	56.1	4.0	24.9	0.9	1.0	13.2	13.7
Chinese Taipei	2019	706	69.8	69.4	22.0	1.2	6.8	0.6	0.0	64.4	74.9
	2023	1110	67.8	67.7	21.0	2.1	9.1	0.2	0.0	66.0	69.5
England	2019	486	24.9	24.5	41.2	5.5	27.1	1.1	0.7	16.2	34.8
	2023	620	35.0	34.8	39.2	4.9	20.7	0.3	0.1	30.8	38.9
Finland	2019	681	35.4	35.0	30.6	1.6	31.5	0.8	0.4	34.6	36.3
	2023	862	33.7	33.5	36.4	1.8	27.7	0.3	0.4	29.8	36.9
France	2019	545	24.4	23.9	53.6	3.1	17.5	0.5	1.4	19.5	28.9
	2023	649	22.3	22.1	56.3	4.3	16.5	0.2	0.6	18.8	26.0
Georgia	2019	472	42.6	41.6	39.8	4.3	12.0	1.0	1.3	34.3	49.7
	2023	712	36.1	35.3	42.1	6.3	14.2	0.8	1.4	34.7	37.3
Hong Kong SAR	2019	467	53.2	52.9	21.2	5.1	20.3	0.4	0.2	50.5	55.6
	2023	651	54.5	54.1	21.1	6.3	17.8	0.2	0.5	49.4	58.5
Hungary	2019	653	44.5	44.5	39.7	1.2	14.6	0.0	0.0	36.6	52.0
	2023	798	46.5	46.5	35.3	2.7	15.4	0.0	0.0	42.3	51.1
Israel	2019	533	36.7	35.9	29.8	3.6	28.7	1.2	0.9	34.8	38.6
	2023	755	29.8	29.2	41.6	3.4	23.6	0.5	1.7	21.4	38.0
Italy	2019	512	37.0	35.9	41.4	4.2	15.6	0.9	1.9	31.9	41.6
	2023	672	30.7	30.6	49.4	2.7	17.0	0.1	0.2	26.5	35.1
Korea, Rep. of	2019	560	55.3	55.1	28.3	2.7	13.6	0.3	0.0	49.0	61.2
	2023	860	48.8	48.7	37.4	3.3	10.4	0.2	0.0	43.8	53.5
Lithuania	2019	555	42.9	42.8	37.9	2.4	16.6	0.3	0.0	41.9	44.1
	2023	785	39.0	38.9	40.3	3.0	17.7	0.1	0.0	36.7	41.4
Malaysia	2019	1005	26.3	25.9	41.7	6.6	24.0	0.7	1.0	26.7	26.0
	2023	1255	22.9	22.4	42.3	9.6	23.8	0.7	1.2	21.1	24.7
Norway (9)	2019	644	28.2	27.5	40.2	3.6	26.4	1.0	1.2	26.4	29.8
	2023	903	24.2	23.8	43.1	5.6	25.7	0.8	1.1	18.7	28.7
Portugal	2019	485	52.0	51.7	29.1	2.9	15.7	0.2	0.3	45.7	58.3
	2023	796	35.3	35.0	40.7	4.5	18.8	0.4	0.4	32.0	38.6
Qatar	2019	557	53.8	52.5	24.5	5.7	14.9	0.8	1.6	51.5	56.3
	2023	632	47.3	46.4	31.7	2.9	17.1	0.5	1.3	42.4	52.5
Singapore	2019	690	55.2	55.1	23.5	5.0	16.2	0.0	0.2	50.4	59.5
	2023	964	66.1	66.1	18.5	4.4	10.9	0.0	0.1	61.2	70.6
Sweden	2019	574	30.1	29.1	29.7	2.6	35.5	1.3	1.8	30.9	29.4
	2023	744	38.1	37.5	28.4	3.2	29.4	0.4	1.1	33.1	43.2
United Arab Emirates	2019	3161	43.2	42.2	32.1	6.3	16.9	1.1	1.3	40.6	45.6
	2023	4041	46.6	45.4	32.1	4.3	15.6	0.4	2.2	42.4	50.5
United States	2019	1222	21.4	20.7	45.8	2.6	27.4	0.9	2.5	18.8	24.2
	2023	1159	23.5	23.0	45.7	4.1	25.1	0.4	1.8	19.6	27.0
International Avg. (20)	2019	15096	39.6	39.0	35.3	3.7	20.3	0.8	1.0	36.0	43.1
	2023	19612	38.1	37.7	37.9	4.2	19.1	0.4	0.8	34.2	41.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Knowing

B_SD2_12 SE62205: Gases in Earth's atmosphere - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1161	30.8	29.9	39.2	9.4	18.7	1.2	1.6	28.7	32.6
	2023	1032	36.9	36.3	39.0	7.2	15.6	0.0	1.8	33.6	40.2
Dubai, UAE	2019	808	55.6	54.4	25.4	2.9	15.2	1.1	0.9	52.4	58.5
	2023	1181	55.9	54.0	26.1	1.8	14.8	0.7	2.6	50.7	60.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing
B_SD2_13 SE62190: Disadvantage of solar energy - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	60.7	7.8	17.5	12.2	57.9	1.3	3.4	58.5	62.6
	2023	644	54.0	9.8	22.1	12.9	52.7	1.2	1.3	50.1	57.5
Chinese Taipei	2019	706	85.1	1.6	9.6	3.6	84.6	0.6	0.0	84.3	85.9
	2023	1110	80.8	1.8	14.9	2.4	80.8	0.1	0.0	79.1	82.5
England	2019	486	66.9	6.6	20.5	5.3	65.4	1.5	0.7	61.3	72.9
	2023	620	69.6	3.9	18.6	7.7	69.1	0.6	0.1	63.8	75.2
Finland	2019	681	82.6	7.3	7.0	2.9	81.3	1.2	0.4	81.2	83.9
	2023	862	77.0	8.2	9.6	5.1	76.5	0.3	0.4	71.8	81.3
France	2019	545	62.0	9.1	17.8	10.0	60.2	1.3	1.6	60.2	63.8
	2023	649	54.8	14.0	20.6	10.0	54.1	0.7	0.6	51.6	58.2
Georgia	2019	471	44.8	12.0	22.8	18.1	42.8	3.0	1.3	40.8	48.2
	2023	712	45.7	15.2	21.0	17.0	44.7	0.3	1.8	39.4	51.0
Hong Kong SAR	2019	467	68.7	5.3	16.1	9.6	68.0	0.8	0.2	62.4	74.3
	2023	651	75.5	2.9	13.6	7.8	74.8	0.3	0.5	70.6	79.5
Hungary	2019	653	68.8	7.2	15.7	8.3	68.6	0.2	0.0	65.2	72.1
	2023	798	70.6	8.2	12.4	8.7	70.4	0.3	0.0	67.7	73.8
Israel	2019	533	53.7	10.0	22.5	12.9	52.6	1.0	1.1	50.8	56.7
	2023	755	41.2	12.7	29.9	14.7	40.1	0.7	1.9	40.0	42.3
Italy	2019	512	61.6	8.9	16.0	12.2	59.5	1.3	2.1	57.3	65.5
	2023	672	57.9	7.5	19.8	14.3	57.4	0.7	0.2	54.0	62.1
Korea, Rep. of	2019	560	60.3	5.0	24.3	10.4	60.3	0.0	0.0	55.3	65.0
	2023	860	56.6	5.4	28.4	9.5	56.4	0.2	0.0	50.6	62.1
Lithuania	2019	555	65.5	11.8	8.1	14.4	65.1	0.7	0.0	66.4	64.6
	2023	785	62.6	9.2	12.0	16.3	62.6	0.0	0.0	61.3	63.9
Malaysia	2019	1005	39.6	14.2	30.2	14.8	38.9	0.6	1.2	38.3	40.8
	2023	1255	40.3	16.4	24.6	17.5	39.5	0.0	1.9	35.7	45.1
Norway (9)	2019	644	69.3	7.5	12.2	10.0	67.0	2.0	1.3	68.2	70.4
	2023	903	65.2	11.0	12.2	11.1	64.3	0.3	1.1	64.5	65.8
Portugal	2019	485	63.5	5.8	17.9	12.7	63.2	0.1	0.3	56.0	71.1
	2023	796	61.7	7.0	17.8	13.2	61.2	0.1	0.6	55.2	68.1
Qatar	2019	557	52.2	14.2	18.5	13.5	50.4	1.6	1.8	49.5	55.0
	2023	632	58.4	11.0	19.5	10.4	57.3	0.0	1.8	57.5	59.3
Singapore	2019	690	81.8	2.4	11.7	4.0	81.3	0.5	0.2	76.9	86.1
	2023	964	83.5	2.0	10.0	4.5	83.2	0.2	0.1	80.8	85.9
Sweden	2019	574	76.1	7.7	7.6	7.8	73.4	1.8	1.8	76.4	75.7
	2023	744	72.1	7.4	8.6	11.4	70.6	0.7	1.3	72.0	72.1
United Arab Emirates	2019	3161	54.3	10.4	20.1	13.9	52.8	1.1	1.6	55.3	53.4
	2023	4041	59.9	6.3	18.5	13.9	58.0	0.7	2.6	57.4	62.4
United States	2019	1222	72.1	8.1	11.1	7.5	69.0	1.5	2.8	73.4	70.8
	2023	1159	69.4	4.3	14.5	11.0	67.6	0.4	2.2	63.2	75.0
International Avg. (20)	2019	15095	64.5	8.1	16.4	10.2	63.1	1.1	1.1	61.9	66.9
	2023	19612	62.8	8.2	17.4	11.0	62.1	0.4	0.9	59.3	66.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Knowing
B_SD2_13 SE62190: Disadvantage of solar energy - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1162	44.3	13.0	20.0	21.1	43.1	1.2	1.7	45.8	42.8
	2023	1032	48.0	9.2	16.9	24.5	46.7	0.9	1.8	41.5	54.2
Dubai, UAE	2019	808	66.7	5.8	20.3	6.6	65.4	0.6	1.4	64.8	68.5
	2023	1181	70.9	3.5	18.3	6.2	68.3	0.4	3.3	68.5	73.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing
B_SD2_14A SE62024A: Forming layered rock - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	588	35.7	32.0	24.5	8.4	24.8	6.1	4.2	29.8	40.7
	2023	644	26.8	23.5	30.4	8.6	25.2	10.4	1.9	26.4	27.2
Chinese Taipei	2019	706	66.0	65.6	16.2	3.0	14.6	0.6	0.0	69.2	62.8
	2023	1110	68.7	68.4	12.9	3.8	14.5	0.4	0.0	74.0	63.7
England	2019	486	62.7	60.8	9.5	6.8	19.9	2.3	0.7	59.7	65.9
	2023	620	68.0	67.1	7.8	6.2	17.5	1.2	0.1	67.3	68.7
Finland	2019	681	34.4	33.7	23.0	6.8	34.6	1.7	0.4	32.1	36.4
	2023	862	35.2	34.8	25.0	9.4	29.7	0.7	0.4	29.8	39.7
France	2019	545	32.8	30.9	24.5	8.1	30.6	3.6	2.4	29.7	35.7
	2023	649	37.8	36.9	19.9	6.3	34.4	1.6	0.9	32.7	43.3
Georgia	2019	471	26.9	24.6	24.6	21.1	21.1	5.5	3.0	24.5	29.0
	2023	712	27.2	25.9	22.8	17.3	29.1	3.0	1.8	24.6	29.5
Hong Kong SAR	2019	467	44.6	44.0	21.4	12.2	21.0	1.3	0.2	47.6	42.0
	2023	651	40.9	40.0	24.8	10.3	22.9	1.5	0.5	42.5	39.6
Hungary	2019	653	61.0	60.7	18.6	4.5	15.8	0.4	0.0	63.3	58.7
	2023	798	59.8	59.1	19.7	3.3	16.7	1.2	0.0	62.2	57.2
Israel	2019	533	31.5	30.7	24.3	15.6	26.8	1.6	1.1	28.6	34.5
	2023	755	26.9	25.9	30.3	13.2	26.7	1.9	2.0	26.0	27.8
Italy	2019	512	51.8	49.4	16.6	9.1	20.2	2.3	2.3	53.2	50.5
	2023	672	49.5	48.0	15.3	14.1	19.6	2.5	0.5	52.3	46.5
Korea, Rep. of	2019	560	73.2	72.5	16.4	2.5	7.6	1.1	0.0	70.8	75.5
	2023	860	82.1	81.8	10.2	2.0	5.6	0.4	0.0	81.7	82.5
Lithuania	2019	555	54.7	54.5	12.2	3.9	28.9	0.2	0.3	60.6	47.8
	2023	785	53.8	53.5	11.7	6.9	27.3	0.6	0.0	60.3	47.0
Malaysia	2019	1005	30.8	30.2	13.5	11.1	43.4	0.6	1.3	32.0	29.7
	2023	1255	33.9	33.0	17.4	16.3	30.6	0.8	1.9	34.0	33.8
Norway (9)	2019	644	38.7	36.5	21.9	10.4	25.6	4.1	1.5	35.6	41.4
	2023	903	31.3	30.2	24.0	12.7	29.5	2.4	1.1	29.0	33.2
Portugal	2019	485	77.2	76.8	6.8	2.9	13.0	0.3	0.3	74.9	79.6
	2023	796	70.0	68.8	11.3	6.1	12.1	1.1	0.6	67.7	72.2
Qatar	2019	557	67.0	64.8	8.1	6.2	17.6	1.0	2.3	65.6	68.4
	2023	632	55.5	53.9	13.1	10.0	20.1	1.1	1.8	55.5	55.5
Singapore	2019	690	44.1	43.7	19.5	10.2	25.6	0.9	0.2	37.1	50.4
	2023	964	48.1	47.8	14.9	9.0	27.7	0.5	0.1	46.8	49.2
Sweden	2019	574	44.0	40.8	28.1	10.4	13.4	4.8	2.4	47.4	40.7
	2023	744	48.6	46.9	22.6	13.7	13.2	2.1	1.4	46.1	51.2
United Arab Emirates	2019	3161	55.2	53.1	12.7	14.3	16.1	1.9	2.0	55.0	55.5
	2023	4041	57.5	54.9	12.5	10.0	18.0	1.4	3.2	57.4	57.6
United States	2019	1222	66.1	62.9	9.1	6.7	16.4	1.7	3.1	67.8	64.4
	2023	1159	62.8	60.6	10.9	8.7	16.3	1.2	2.4	62.9	62.8
International Avg. (20)	2019	15095	49.9	48.4	17.6	8.7	21.8	2.1	1.4	49.2	50.5
	2023	19612	49.2	48.1	17.9	9.4	21.8	1.8	1.0	49.0	49.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Knowing

B_SD2_14A SE62024A: Forming layered rock - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1163	42.9	41.1	17.3	20.0	17.4	2.2	2.0	41.1	44.5
	2023	1032	51.8	49.4	15.5	13.9	16.6	2.2	2.4	51.6	52.0
Dubai, UAE	2019	808	63.9	62.4	10.3	8.9	16.0	0.8	1.6	66.7	61.3
	2023	1181	68.0	64.6	8.9	6.2	15.3	1.2	3.7	69.4	66.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Applying
B_SD2_14B SE62024B: Shaping rock formations - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019 2023	588 644	17.6 7.6	54.9 53.5	11.7 4.4	26.3 35.9	7.1 6.2	15.5 6.5	19.5 8.5
Chinese Taipei	2019 2023	706 1110	29.4 28.2	62.4 64.7	25.9 25.4	11.5 9.9	0.2 0.0	26.4 27.4	32.4 29.0
England	2019 2023	486 620	25.5 33.9	59.1 48.4	20.2 24.8	19.0 26.4	1.7 0.4	25.7 30.3	25.3 37.7
Finland	2019 2023	681 862	21.6 15.9	58.1 63.7	16.0 12.1	25.1 23.8	0.8 0.4	19.4 15.0	23.5 16.6
France	2019 2023	545 649	9.9 16.3	60.9 49.4	6.7 9.6	28.4 39.5	4.0 1.5	8.4 11.9	11.4 20.8
Georgia	2019 2023	472 712	4.1 4.7	41.6 39.9	1.8 2.0	51.4 54.5	5.3 3.6	5.2 4.1	3.0 5.2
Hong Kong SAR	2019 2023	467 651	18.6 15.7	60.6 57.4	13.9 10.7	24.8 30.8	0.7 1.0	22.6 14.0	14.6 17.2
Hungary	2019 2023	653 798	32.9 36.2	52.1 44.3	25.5 25.2	22.2 30.5	0.2 0.0	31.4 37.8	34.3 34.6
Israel	2019 2023	533 754	15.1 7.7	61.1 60.1	10.9 5.0	26.3 32.3	1.7 2.6	8.5 5.7	22.5 9.6
Italy	2019 2023	512 672	19.5 19.8	55.6 47.9	13.5 11.8	27.4 39.0	3.5 1.2	22.8 17.5	16.5 21.9
Korea, Rep. of	2019 2023	560 860	48.6 42.0	47.5 51.5	44.9 37.3	7.4 11.2	0.2 0.0	51.0 43.1	46.3 41.0
Lithuania	2019 2023	555 785	21.5 24.2	55.2 47.2	15.1 15.1	29.4 37.4	0.3 0.3	26.5 28.9	14.8 18.7
Malaysia	2019 2023	1005 1255	12.1 18.9	79.4 69.2	10.9 16.1	8.2 12.7	1.5 2.0	11.0 17.4	13.2 20.4
Norway (9)	2019 2023	644 903	18.2 14.5	53.5 55.6	11.9 9.4	30.8 33.1	3.7 1.8	15.5 15.1	20.8 14.0
Portugal	2019 2023	485 796	27.3 29.3	59.0 50.0	22.2 20.8	18.6 28.3	0.3 0.9	24.9 25.6	30.1 32.8
Qatar	2019 2023	557 632	13.8 16.8	63.7 61.3	10.2 12.4	23.2 23.7	2.9 2.6	16.5 18.6	10.2 14.5
Singapore	2019 2023	690 964	11.6 14.6	81.7 80.1	10.7 13.7	7.0 6.0	0.6 0.2	10.9 12.9	12.2 16.2
Sweden	2019 2023	574 744	41.5 29.8	38.9 46.5	27.7 19.8	29.2 31.6	4.1 2.1	49.0 29.3	33.7 30.2
United Arab Emirates	2019 2023	3167 4041	11.1 12.9	71.9 63.9	9.0 9.4	16.5 22.7	2.6 3.9	9.7 12.9	12.5 12.8
United States	2019 2023	1222 1159	29.0 24.3	64.7 68.5	26.4 21.9	5.3 7.0	3.6 2.6	26.2 18.6	31.8 29.7
International Avg. (20)	2019 2023	15102 19611	21.4 20.7	59.1 56.2	16.8 15.3	21.9 26.8	2.2 1.7	21.4 19.6	21.4 21.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Applying
B_SD2_14B SE62024B: Shaping rock formations - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1165	9.2	70.5	7.1	19.6	2.8	8.3	10.1
	2023	1032	9.4	63.6	6.6	26.5	3.4	8.2	10.6
Dubai, UAE	2019	808	14.9	74.2	13.0	10.9	1.9	13.4	16.4
	2023	1181	18.0	65.2	14.3	16.1	4.4	19.7	16.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing
B_SM2_01 SE62279: Healthy and balanced meal - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	48.8	48.2	1.4	28.3	20.9	1.2	0.0	54.6	43.6
	2023	640	66.3	65.8	1.8	11.9	19.7	0.2	0.6	68.8	64.1
Chinese Taipei	2019	699	83.7	83.4	1.2	9.3	5.9	0.3	0.0	87.1	80.2
	2023	798	86.5	86.3	1.7	6.9	4.8	0.3	0.0	87.9	85.3
England	2019	468	83.5	82.8	5.8	3.2	7.4	0.6	0.2	85.9	80.2
	2023	597	86.6	86.6	5.5	2.9	5.0	0.0	0.0	87.3	86.0
Finland	2019	695	86.9	86.1	4.3	6.6	2.1	0.2	0.7	91.0	82.7
	2023	833	82.7	82.6	5.1	8.3	3.9	0.0	0.1	85.0	80.6
France	2019	562	77.9	77.6	4.2	7.7	10.1	0.4	0.0	80.7	75.3
	2023	642	78.7	78.5	3.0	6.3	12.0	0.2	0.0	78.4	79.0
Georgia	2019	462	35.7	35.5	4.3	25.3	34.4	0.3	0.2	36.1	35.2
	2023	690	49.5	49.4	4.2	16.4	29.9	0.2	0.0	55.7	43.3
Hong Kong SAR	2019	466	77.5	77.4	11.1	3.8	7.5	0.2	0.0	79.7	75.5
	2023	637	83.5	83.4	6.0	4.0	6.5	0.0	0.2	86.5	80.5
Hungary	2019	643	75.1	75.1	2.5	8.5	13.9	0.0	0.0	73.9	76.2
	2023	772	78.1	78.0	2.7	6.4	12.8	0.1	0.0	80.4	75.6
Israel	2019	521	70.1	70.0	3.8	9.6	16.4	0.2	0.0	74.3	65.1
	2023	736	72.4	72.0	2.8	7.4	17.3	0.3	0.3	78.2	66.2
Italy	2019	513	73.1	72.7	4.6	8.7	13.4	0.6	0.0	74.3	72.0
	2023	657	81.6	81.6	4.9	4.1	9.4	0.0	0.0	83.5	79.6
Korea, Rep. of	2019	552	89.4	89.4	1.0	5.9	3.7	0.0	0.0	91.8	87.2
	2023	609	88.2	88.2	2.3	5.0	4.4	0.0	0.0	88.9	87.6
Lithuania	2019	539	74.5	74.3	4.1	7.8	13.5	0.3	0.0	80.7	67.8
	2023	778	79.0	79.0	2.1	8.3	10.6	0.0	0.0	78.7	79.3
Malaysia	2019	1013	60.3	60.1	4.9	10.8	23.9	0.4	0.0	65.5	54.9
	2023	1255	65.9	65.9	4.1	6.7	23.3	0.0	0.0	69.1	62.7
Norway (9)	2019	659	64.6	63.9	10.9	17.9	6.3	0.8	0.2	64.2	64.9
	2023	896	71.9	71.3	6.8	14.1	7.0	0.2	0.6	71.2	72.6
Portugal	2019	487	78.5	78.4	1.8	3.1	16.6	0.1	0.0	80.5	76.4
	2023	784	77.4	77.4	3.4	3.6	15.6	0.0	0.0	81.6	72.9
Qatar	2019	560	50.8	50.1	3.7	13.7	31.1	1.1	0.3	56.0	45.2
	2023	616	62.8	62.4	2.8	11.5	22.7	0.5	0.0	68.8	56.2
Singapore	2019	693	89.0	88.8	2.5	5.0	3.5	0.3	0.0	91.5	86.9
	2023	676	91.4	91.4	2.5	2.9	3.2	0.0	0.0	91.9	90.9
Sweden	2019	577	88.6	87.2	4.4	3.9	3.0	1.2	0.4	90.7	86.4
	2023	714	87.4	86.8	5.4	4.4	2.7	0.1	0.5	89.1	85.8
United Arab Emirates	2019	3158	54.9	54.6	5.0	13.1	26.9	0.4	0.1	60.2	50.0
	2023	4708	65.1	65.0	3.9	9.8	21.2	0.1	0.1	67.8	62.4
United States	2019	1237	77.1	76.7	4.9	4.9	13.0	0.3	0.2	81.0	73.1
	2023	1158	81.6	81.4	4.1	4.4	9.9	0.0	0.1	84.5	78.8
International Avg. (20)	2019	15089	72.0	71.6	4.3	9.8	13.7	0.4	0.1	75.0	68.9
	2023	19196	76.8	76.6	3.8	7.3	12.1	0.1	0.1	79.2	74.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing

B_SM2_01 SE62279: Healthy and balanced meal - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	46.7	46.5	7.8	15.0	30.3	0.4	0.1	52.1	41.8
	2023	1740	54.5	54.3	6.5	11.3	27.5	0.2	0.1	55.5	53.6
Dubai, UAE	2019	803	72.9	72.7	2.0	6.9	18.1	0.1	0.1	74.3	71.5
	2023	1175	81.9	81.9	2.2	3.9	12.0	0.0	0.0	86.2	77.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SM2_02 SE62112: Tony gets the measles - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	58.8	40.4	57.6	2.0	0.0	66.0	52.4
	2023	640	39.5	57.9	37.8	3.7	0.6	42.0	37.3
Chinese Taipei	2019	698	32.7	67.3	32.7	0.0	0.0	33.0	32.3
	2023	798	22.5	77.5	22.5	0.0	0.0	24.5	20.7
England	2019	468	57.4	42.1	56.7	1.0	0.2	58.2	56.3
	2023	597	60.8	39.1	60.6	0.3	0.0	56.3	65.1
Finland	2019	695	66.3	33.3	65.4	0.7	0.7	68.0	64.5
	2023	833	63.9	36.0	63.8	0.1	0.1	67.0	61.2
France	2019	562	54.6	44.9	54.0	1.0	0.0	57.4	52.1
	2023	642	54.3	45.4	53.9	0.7	0.0	55.4	53.1
Georgia	2019	461	21.9	77.4	21.7	0.7	0.2	24.6	19.5
	2023	690	60.9	39.0	60.6	0.5	0.0	64.6	57.2
Hong Kong SAR	2019	466	43.3	55.9	42.7	1.4	0.0	42.4	44.1
	2023	637	44.5	55.2	44.2	0.4	0.2	40.0	48.8
Hungary	2019	643	63.5	36.5	63.5	0.0	0.0	66.0	61.0
	2023	772	57.6	42.3	57.5	0.3	0.0	57.3	58.0
Israel	2019	521	31.3	67.9	31.0	1.1	0.0	29.5	33.5
	2023	736	45.1	54.0	44.4	1.1	0.5	45.1	45.1
Italy	2019	513	65.0	34.7	64.4	0.9	0.0	67.3	62.9
	2023	657	64.7	35.1	64.4	0.5	0.0	67.2	62.2
Korea, Rep. of	2019	552	53.6	46.2	53.4	0.4	0.0	51.6	55.5
	2023	609	41.1	58.7	41.0	0.4	0.0	38.8	43.1
Lithuania	2019	539	65.0	35.0	64.8	0.2	0.0	68.6	61.1
	2023	778	63.2	36.7	63.1	0.2	0.0	62.7	63.7
Malaysia	2019	1013	41.3	58.5	41.1	0.3	0.0	46.4	35.9
	2023	1255	29.9	70.1	29.9	0.0	0.0	32.6	27.0
Norway (9)	2019	659	63.6	36.0	62.9	0.9	0.2	65.0	62.3
	2023	896	60.6	38.7	59.5	1.2	0.6	63.2	58.6
Portugal	2019	487	56.4	43.3	56.0	0.7	0.0	60.4	52.4
	2023	784	53.8	45.9	53.5	0.6	0.0	58.9	48.5
Qatar	2019	560	28.2	70.5	27.7	1.6	0.3	31.0	25.1
	2023	616	33.9	65.3	33.6	1.1	0.0	35.6	32.1
Singapore	2019	693	42.6	57.4	42.6	0.0	0.0	40.1	44.7
	2023	676	44.9	55.1	44.9	0.0	0.0	41.0	48.5
Sweden	2019	577	64.7	34.8	63.6	1.2	0.4	69.2	60.1
	2023	714	67.3	32.0	65.8	1.6	0.5	67.9	66.7
United Arab Emirates	2019	3159	31.2	68.1	31.0	0.8	0.1	31.7	30.8
	2023	4708	35.8	63.8	35.6	0.5	0.1	33.6	38.0
United States	2019	1237	47.2	52.5	47.0	0.3	0.2	51.1	43.2
	2023	1158	42.3	57.2	42.0	0.6	0.1	36.6	47.6
International Avg. (20)	2019	15088	49.4	50.1	49.0	0.8	0.1	51.4	47.5
	2023	19196	49.3	50.2	48.9	0.7	0.1	49.5	49.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SM2_02 SE62112: Tony gets the measles - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	23.9	75.2	23.7	1.0	0.1	26.6	21.5
	2023	1740	27.9	71.4	27.6	0.9	0.1	26.7	29.0
Dubai, UAE	2019	803	39.7	59.9	39.4	0.6	0.1	35.8	43.5
	2023	1175	47.6	52.1	47.4	0.4	0.0	42.1	53.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Reasoning
B_SM2_03 SE62119: Fossils in rock layers - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	55.4	8.6	18.2	53.7	16.5	2.9	0.0	55.2	55.5
	2023	640	51.7	7.8	24.4	50.4	14.9	2.0	0.6	53.8	49.9
Chinese Taipei	2019	699	82.7	5.6	6.6	82.5	5.1	0.2	0.0	84.9	80.5
	2023	798	83.8	3.9	6.3	83.8	6.0	0.0	0.0	87.7	80.2
England	2019	468	66.3	7.1	17.3	65.4	8.8	1.1	0.2	68.5	63.4
	2023	597	70.6	6.8	13.8	70.5	8.8	0.1	0.0	68.9	72.2
Finland	2019	695	60.2	6.2	18.1	59.2	14.9	0.9	0.7	64.5	55.7
	2023	833	57.3	8.5	18.4	56.9	15.5	0.6	0.1	60.4	54.4
France	2019	562	62.9	5.6	15.2	62.1	15.8	1.2	0.0	64.8	61.3
	2023	642	60.9	4.8	18.0	60.4	15.9	0.9	0.0	62.0	59.8
Georgia	2019	460	45.0	9.3	21.9	43.3	21.6	3.6	0.2	51.1	39.6
	2023	690	45.0	11.1	19.9	44.2	23.0	1.8	0.0	46.4	43.7
Hong Kong SAR	2019	466	67.4	8.8	13.9	66.9	9.6	0.8	0.0	67.9	67.0
	2023	637	70.0	7.8	10.9	69.9	11.2	0.0	0.2	67.8	72.2
Hungary	2019	643	61.2	5.0	24.5	60.8	9.1	0.5	0.0	62.4	60.0
	2023	772	56.4	7.1	24.3	56.2	12.1	0.3	0.0	55.6	57.2
Israel	2019	521	62.1	5.7	20.1	61.0	11.4	1.8	0.0	61.2	63.2
	2023	736	55.2	8.1	22.8	54.7	13.6	0.4	0.5	53.9	56.5
Italy	2019	513	70.7	5.9	14.0	69.7	9.1	1.3	0.0	69.5	71.8
	2023	657	72.0	3.6	15.9	71.9	8.4	0.2	0.0	76.2	67.7
Korea, Rep. of	2019	552	74.0	2.2	16.5	73.9	7.3	0.2	0.0	75.1	73.0
	2023	609	79.4	3.5	12.0	79.4	5.1	0.0	0.0	78.4	80.3
Lithuania	2019	539	68.6	4.0	16.6	67.4	10.3	1.8	0.0	73.5	63.3
	2023	778	67.4	4.3	17.0	67.2	11.2	0.2	0.0	68.4	66.3
Malaysia	2019	1013	71.4	3.4	15.6	71.1	9.5	0.2	0.1	75.8	66.8
	2023	1255	47.3	5.2	26.4	47.3	21.0	0.1	0.0	48.6	46.0
Norway (9)	2019	659	63.2	4.3	14.7	61.7	16.9	2.1	0.2	65.5	61.0
	2023	896	63.8	9.0	12.2	62.1	14.0	1.7	0.9	64.8	63.1
Portugal	2019	487	80.8	3.2	8.3	80.4	7.6	0.5	0.0	83.2	78.5
	2023	784	72.6	5.1	13.3	72.5	9.0	0.1	0.0	73.2	71.9
Qatar	2019	560	45.4	12.5	21.5	44.9	20.1	0.7	0.3	48.0	42.5
	2023	616	46.3	16.6	21.8	45.9	14.9	0.8	0.0	48.5	43.9
Singapore	2019	693	75.2	5.1	11.3	74.8	8.3	0.4	0.0	73.5	76.6
	2023	676	77.2	4.1	12.5	77.1	6.2	0.1	0.0	76.5	77.8
Sweden	2019	577	67.0	6.0	14.1	65.5	12.1	1.9	0.4	68.4	65.6
	2023	714	67.6	5.9	13.8	66.4	12.1	1.2	0.5	67.6	67.6
United Arab Emirates	2019	3158	60.1	9.0	19.7	59.3	10.7	1.2	0.1	64.9	55.7
	2023	4708	66.5	7.1	17.6	66.1	8.6	0.4	0.1	69.2	63.8
United States	2019	1237	78.0	4.1	12.6	77.3	5.1	0.6	0.3	80.6	75.3
	2023	1158	75.2	4.3	14.1	74.8	6.3	0.3	0.2	77.1	73.4
International Avg. (20)	2019	15087	65.9	6.1	16.0	65.1	11.5	1.2	0.1	67.9	63.8
	2023	19196	64.3	6.7	16.8	63.9	11.9	0.6	0.2	65.3	63.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Reasoning
B_SM2_03 SE62119: Fossils in rock layers - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	56.4	10.6	21.4	56.0	11.3	0.8	0.1	64.0	49.6
	2023	1740	63.9	8.0	19.4	63.6	8.4	0.4	0.1	66.6	61.4
Dubai, UAE	2019	803	75.0	3.8	13.8	74.1	7.1	0.8	0.3	76.1	73.8
	2023	1175	78.6	4.0	11.4	78.5	6.0	0.1	0.1	82.1	75.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing
B_SM2_04 SE62093: Mammals in cold weather - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	27.0	42.7	32.2	5.7	18.9	0.5	27.0	27.1
	2023	640	56.9	18.6	33.6	30.0	17.2	0.6	59.1	55.1
Chinese Taipei	2019	699	80.2	6.6	23.9	63.3	6.1	0.0	81.8	78.6
	2023	798	72.8	11.7	29.8	56.2	2.3	0.0	75.6	70.1
England	2019	468	73.2	7.4	33.6	49.2	9.5	0.4	74.7	70.9
	2023	597	69.6	10.0	35.9	46.2	7.9	0.0	66.1	73.2
Finland	2019	695	69.1	9.4	37.8	44.3	7.8	0.7	77.1	60.7
	2023	833	67.8	12.1	36.1	45.4	6.2	0.2	71.8	64.2
France	2019	562	73.5	9.0	28.5	50.3	12.2	0.0	76.1	71.2
	2023	642	66.6	10.6	37.0	39.4	12.8	0.2	68.0	65.0
Georgia	2019	461	56.1	15.1	30.2	23.5	31.0	0.2	56.2	56.0
	2023	690	68.6	8.3	31.9	37.3	22.5	0.0	70.5	66.8
Hong Kong SAR	2019	466	36.8	42.0	30.1	18.1	9.6	0.2	37.6	35.9
	2023	637	70.0	12.5	28.7	48.3	10.4	0.2	71.7	68.2
Hungary	2019	643	78.5	6.7	27.2	60.4	5.7	0.0	81.0	76.0
	2023	771	68.7	10.0	39.1	45.3	5.6	0.0	71.0	66.0
Israel	2019	521	56.7	18.2	35.6	29.4	16.7	0.0	59.1	54.0
	2023	736	58.0	17.7	33.2	30.8	17.8	0.5	58.8	57.2
Italy	2019	513	51.3	25.0	31.8	27.2	16.1	0.0	52.7	50.1
	2023	657	53.4	18.3	40.3	24.0	17.4	0.0	50.7	56.2
Korea, Rep. of	2019	552	64.8	12.2	42.3	40.4	5.1	0.0	63.4	66.2
	2023	609	54.6	21.5	44.4	30.3	3.8	0.0	55.0	54.2
Lithuania	2019	539	70.3	8.9	35.0	44.7	11.4	0.0	73.2	66.8
	2023	778	65.6	10.7	38.0	37.7	13.6	0.0	69.9	61.1
Malaysia	2019	1013	44.0	36.2	35.9	24.7	3.0	0.1	46.8	41.0
	2023	1255	32.1	47.5	35.9	12.9	3.7	0.0	33.0	31.1
Norway (9)	2019	659	63.1	14.8	29.2	35.7	20.1	0.2	68.3	57.7
	2023	896	61.8	16.3	34.8	37.1	10.8	1.0	66.8	57.9
Portugal	2019	487	76.3	6.3	30.6	54.2	8.8	0.0	75.0	77.6
	2023	784	61.9	13.2	41.7	34.5	10.6	0.0	63.9	60.0
Qatar	2019	560	51.7	26.4	33.1	29.5	10.8	0.3	53.7	49.4
	2023	615	58.6	18.7	37.7	34.3	9.2	0.0	59.1	58.0
Singapore	2019	693	81.0	5.8	25.9	66.6	1.7	0.0	81.8	80.2
	2023	676	80.1	6.4	26.9	66.2	0.5	0.0	80.2	79.9
Sweden	2019	577	67.8	12.6	31.6	44.1	10.6	1.1	72.9	62.7
	2023	714	66.9	14.6	31.4	45.5	8.1	0.5	72.2	62.2
United Arab Emirates	2019	3157	50.2	28.8	33.7	29.2	8.2	0.1	54.0	46.6
	2023	4707	54.4	27.3	31.7	35.8	5.1	0.1	56.9	52.1
United States	2019	1237	73.4	9.3	32.8	54.2	3.4	0.3	77.6	68.8
	2023	1158	73.9	9.4	32.0	55.9	2.3	0.4	74.3	73.5
International Avg. (20)	2019	15087	62.2	17.2	32.0	39.7	10.8	0.2	64.5	59.9
	2023	19193	63.1	15.8	35.0	39.6	9.4	0.2	64.7	61.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing
B_SM2_04 SE62093: Mammals in cold weather - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	40.9	38.9	29.1	22.4	9.6	0.1	47.8	34.4
	2023	1739	44.2	37.7	28.4	26.9	6.9	0.1	44.5	43.9
Dubai, UAE	2019	803	64.9	14.7	37.1	43.0	4.9	0.3	65.1	64.7
	2023	1175	68.5	13.9	32.8	49.4	3.9	0.1	71.3	65.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing

B_SM2_05 SE62089: Symbiosis between two organisms - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	24.5	21.4	39.8	11.3	23.6	3.0	0.9	22.1	26.6
	2023	640	26.9	17.5	37.1	16.5	26.2	2.1	0.6	23.1	30.2
Chinese Taipei	2019	699	77.4	6.5	12.4	3.7	77.4	0.0	0.0	80.3	74.5
	2023	798	79.0	4.1	12.5	4.4	79.0	0.0	0.0	83.4	75.0
England	2019	468	24.2	13.3	45.8	14.6	23.5	2.4	0.4	23.2	25.4
	2023	597	29.0	12.5	43.3	14.7	28.8	0.7	0.0	25.3	32.6
Finland	2019	695	51.1	17.6	23.3	7.2	50.3	1.0	0.7	57.8	44.2
	2023	833	43.7	18.2	26.9	10.9	43.5	0.2	0.2	41.6	45.5
France	2019	562	15.0	15.0	54.1	14.2	14.7	2.0	0.0	12.4	17.2
	2023	642	20.0	13.9	49.9	15.4	19.8	0.8	0.2	20.6	19.3
Georgia	2019	462	29.6	25.2	29.3	13.1	28.5	3.6	0.2	32.2	27.4
	2023	690	30.0	24.6	26.7	17.0	29.4	2.3	0.0	34.2	25.9
Hong Kong SAR	2019	466	32.6	27.0	27.7	12.1	32.2	0.8	0.2	31.0	34.0
	2023	636	48.2	17.1	27.0	7.5	48.0	0.2	0.2	40.4	55.7
Hungary	2019	643	38.0	14.9	30.7	15.9	37.8	0.7	0.0	37.6	38.5
	2023	772	39.7	19.2	27.0	14.0	39.7	0.1	0.0	40.2	39.1
Israel	2019	521	60.2	5.5	23.9	9.8	59.3	1.5	0.0	61.2	59.0
	2023	736	42.0	7.6	33.5	16.1	41.5	0.8	0.5	45.9	37.9
Italy	2019	513	21.1	12.5	54.1	11.0	20.7	1.7	0.0	16.7	25.2
	2023	657	22.2	10.4	54.3	12.1	22.0	1.2	0.0	19.5	25.0
Korea, Rep. of	2019	552	53.0	13.0	21.4	12.5	53.0	0.2	0.0	47.3	58.4
	2023	609	55.2	12.8	23.1	8.9	55.2	0.0	0.0	46.5	62.8
Lithuania	2019	539	22.7	15.6	36.6	24.8	22.6	0.4	0.0	19.7	25.9
	2023	778	23.7	17.8	38.6	19.5	23.6	0.4	0.0	20.5	26.9
Malaysia	2019	1013	23.5	18.3	36.9	20.9	23.3	0.4	0.1	24.9	21.9
	2023	1255	21.5	20.2	40.7	17.5	21.4	0.2	0.0	21.4	21.5
Norway (9)	2019	659	24.6	23.1	31.8	18.7	24.0	2.2	0.2	21.8	27.2
	2023	896	30.4	23.0	29.1	15.6	29.6	1.7	1.1	30.6	30.1
Portugal	2019	487	60.9	7.3	17.7	14.1	60.9	0.0	0.0	60.1	61.7
	2023	784	46.2	9.1	29.5	15.1	46.1	0.2	0.0	48.7	43.5
Qatar	2019	560	30.2	16.1	42.7	10.0	29.7	1.2	0.3	32.9	27.2
	2023	616	25.0	17.3	43.4	13.2	24.6	1.4	0.0	27.7	22.0
Singapore	2019	693	64.4	4.7	24.9	5.9	64.2	0.2	0.0	63.9	64.8
	2023	676	76.1	3.5	15.7	4.7	76.0	0.0	0.1	76.9	75.3
Sweden	2019	577	34.5	21.2	32.4	10.0	33.6	1.6	1.1	33.4	35.7
	2023	714	35.1	19.9	31.8	11.8	34.4	1.6	0.5	32.5	37.5
United Arab Emirates	2019	3157	36.0	14.4	34.9	14.0	35.6	0.8	0.2	36.3	35.7
	2023	4708	39.9	12.3	34.3	13.1	39.6	0.6	0.1	38.7	41.1
United States	2019	1237	45.0	10.6	31.9	11.7	44.3	0.9	0.6	48.0	41.8
	2023	1158	36.3	11.1	37.4	14.8	36.1	0.3	0.4	33.6	38.9
International Avg. (20)	2019	15088	38.4	15.2	32.6	12.8	38.0	1.2	0.2	38.2	38.6
	2023	19195	38.5	14.6	33.1	13.2	38.2	0.7	0.2	37.6	39.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SM2_05 SE62089: Symbiosis between two organisms - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	32.1	16.7	32.8	17.6	31.7	0.9	0.3	33.2	31.1
	2023	1740	31.4	14.9	34.1	18.9	31.1	0.8	0.1	31.6	31.1
Dubai, UAE	2019	803	46.0	9.9	32.5	10.9	45.3	1.0	0.3	43.7	48.2
	2023	1175	51.2	9.5	30.1	9.0	51.0	0.4	0.1	49.0	53.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Knowing
B_SM2_06 SE62006: Atoms in nitric acid (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	26.8	45.9	16.8	36.3	0.9	24.6	28.6
	2023	640	21.3	55.8	15.1	28.5	0.6	20.2	22.1
Chinese Taipei	2019	699	53.3	44.8	51.1	4.1	0.0	55.5	51.1
	2023	798	52.1	47.3	51.3	1.4	0.0	58.1	46.5
England	2019	468	57.6	35.9	48.7	14.9	0.5	62.0	51.4
	2023	597	54.4	41.7	49.6	8.5	0.3	59.3	49.6
Finland	2019	695	62.3	34.6	57.2	7.5	0.7	68.9	55.7
	2023	833	52.5	44.6	49.4	5.7	0.2	58.2	47.5
France	2019	562	56.6	37.0	48.3	14.7	0.1	55.5	57.6
	2023	642	52.0	41.1	44.4	14.3	0.2	53.4	50.5
Georgia	2019	462	39.2	47.6	30.7	21.4	0.2	42.0	36.7
	2023	689	49.3	41.7	40.5	17.7	0.0	53.2	45.5
Hong Kong SAR	2019	466	26.9	61.8	22.8	15.2	0.2	28.2	25.7
	2023	636	30.7	60.4	26.7	12.8	0.2	26.3	34.8
Hungary	2019	643	47.4	49.2	44.4	6.4	0.0	43.5	51.1
	2023	772	49.1	48.2	46.5	5.3	0.0	48.7	49.5
Israel	2019	521	66.9	31.0	62.5	6.6	0.0	71.8	61.0
	2023	736	53.5	42.2	48.5	8.7	0.6	57.0	49.8
Italy	2019	513	52.1	38.5	41.9	19.3	0.2	49.2	54.7
	2023	657	56.4	37.5	48.5	14.1	0.0	57.5	55.2
Korea, Rep. of	2019	552	47.7	49.1	44.8	6.0	0.0	50.4	45.2
	2023	609	61.3	38.2	60.4	1.4	0.0	59.9	62.4
Lithuania	2019	539	45.9	50.4	42.7	6.9	0.0	49.9	41.3
	2023	778	41.4	54.4	38.4	7.2	0.0	45.7	37.1
Malaysia	2019	1013	26.3	72.0	25.7	2.1	0.1	30.2	22.2
	2023	1255	15.9	81.9	15.5	2.6	0.0	16.4	15.3
Norway (9)	2019	659	42.6	48.8	36.2	14.7	0.4	46.7	38.7
	2023	896	34.0	57.4	29.6	11.7	1.2	38.1	30.9
Portugal	2019	487	63.9	33.5	59.2	7.4	0.0	63.4	64.4
	2023	784	61.9	35.7	58.0	6.3	0.0	66.0	57.6
Qatar	2019	560	57.6	40.3	54.7	4.7	0.3	63.4	50.9
	2023	616	46.0	52.1	44.4	3.5	0.0	46.3	45.6
Singapore	2019	693	73.5	26.1	72.5	1.4	0.0	74.4	72.7
	2023	676	72.8	27.0	72.2	0.7	0.1	75.4	70.4
Sweden	2019	577	57.2	38.0	50.8	10.1	1.1	61.9	52.5
	2023	713	53.8	42.7	49.7	7.1	0.5	56.3	51.7
United Arab Emirates	2019	3158	54.2	44.0	52.2	3.5	0.3	60.4	48.6
	2023	4704	55.1	43.6	53.4	2.8	0.2	58.9	51.4
United States	2019	1237	46.2	51.2	44.1	4.1	0.6	47.0	45.5
	2023	1158	41.9	55.9	40.3	3.4	0.4	41.1	42.7
International Avg. (20)	2019	15089	50.2	44.0	45.4	10.4	0.3	52.4	47.8
	2023	19189	47.8	47.5	44.1	8.2	0.2	49.8	45.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Knowing

B_SM2_06 SE62006: Atoms in nitric acid (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	44.3	53.7	42.8	3.2	0.4	51.8	37.5
	2023	1738	42.6	55.4	41.2	3.2	0.1	45.8	39.6
Dubai, UAE	2019	803	67.3	31.3	64.4	3.8	0.4	68.0	66.7
	2023	1175	68.9	29.8	66.1	3.9	0.1	70.8	67.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning
B_SM2_07 SE62067: Rate of sugar dissolving - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	32.4	61.4	29.5	7.6	1.5	30.7	34.0
	2023	640	24.2	66.5	21.2	11.6	0.7	23.5	24.8
Chinese Taipei	2019	699	62.8	36.4	61.5	2.0	0.0	64.7	61.0
	2023	798	70.3	29.6	70.2	0.2	0.0	72.8	68.0
England	2019	468	41.6	55.9	39.8	3.8	0.5	43.7	38.8
	2023	597	43.9	52.3	41.0	6.5	0.3	44.6	43.3
Finland	2019	695	49.7	47.6	47.0	4.5	0.8	55.8	43.6
	2023	833	49.2	48.9	47.3	3.4	0.4	53.3	45.5
France	2019	562	42.0	54.3	39.3	6.0	0.5	42.7	41.4
	2023	642	37.5	58.0	34.9	6.9	0.2	40.2	34.7
Georgia	2019	463	29.0	58.7	24.0	17.0	0.2	25.2	32.6
	2023	690	36.4	57.4	32.8	9.8	0.0	35.7	37.0
Hong Kong SAR	2019	466	62.6	35.7	59.9	4.2	0.2	60.5	64.6
	2023	637	62.3	36.8	61.0	2.0	0.2	57.6	67.0
Hungary	2019	643	46.8	52.7	46.4	0.9	0.0	44.2	49.5
	2023	772	47.2	51.6	46.2	2.2	0.0	45.9	48.7
Israel	2019	521	47.0	50.4	44.7	4.9	0.0	47.7	46.1
	2023	736	42.6	54.0	40.0	5.4	0.6	45.8	39.1
Italy	2019	513	35.5	62.0	34.1	3.7	0.2	36.7	34.3
	2023	657	39.2	58.2	37.5	4.3	0.0	37.8	40.5
Korea, Rep. of	2019	552	68.0	31.2	66.3	2.5	0.0	70.5	65.7
	2023	609	67.5	32.0	66.4	1.7	0.0	68.4	66.7
Lithuania	2019	539	50.1	48.4	48.7	2.9	0.0	50.6	49.6
	2023	778	47.8	50.3	46.1	3.6	0.0	48.1	47.6
Malaysia	2019	1013	38.6	60.9	38.3	0.5	0.3	38.9	38.4
	2023	1255	31.8	67.9	31.7	0.4	0.0	31.9	31.8
Norway (9)	2019	659	40.4	53.4	36.2	10.0	0.4	46.1	35.0
	2023	896	37.5	55.8	33.5	9.3	1.4	41.8	34.1
Portugal	2019	487	44.2	54.3	43.0	2.2	0.4	42.2	46.2
	2023	784	43.6	55.4	42.8	1.8	0.0	45.8	41.3
Qatar	2019	560	30.8	65.6	29.2	4.1	1.1	33.0	28.2
	2023	616	34.9	63.4	33.9	2.7	0.0	31.4	38.8
Singapore	2019	693	64.8	35.0	64.2	0.8	0.0	66.0	63.7
	2023	676	67.0	32.9	66.7	0.3	0.1	69.1	65.0
Sweden	2019	577	46.5	47.5	41.2	10.0	1.4	49.1	43.8
	2023	714	43.6	51.8	40.1	7.4	0.7	50.0	37.9
United Arab Emirates	2019	3159	33.6	64.5	32.6	2.5	0.4	34.1	33.1
	2023	4708	38.4	60.5	37.6	1.7	0.2	37.0	39.7
United States	2019	1237	34.2	63.4	32.9	2.9	0.8	35.0	33.3
	2023	1158	30.6	67.9	30.0	1.5	0.6	27.8	33.1
International Avg. (20)	2019	15091	45.0	52.0	42.9	4.7	0.4	45.9	44.1
	2023	19196	44.8	52.6	43.0	4.1	0.3	45.4	44.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Reasoning

B_SM2_07 SE62067: Rate of sugar dissolving - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	25.6	72.4	24.9	2.3	0.4	27.4	24.0
	2023	1740	29.9	68.4	29.2	2.2	0.2	29.0	30.7
Dubai, UAE	2019	803	48.3	50.4	47.0	2.2	0.4	44.7	51.8
	2023	1175	51.5	47.8	50.7	1.2	0.3	49.6	53.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Knowing
B_SM2_08 SE62247: Properties of baking soda - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	26.5	6.8	24.6	26.3	34.8	6.0	1.5	20.5	31.9
	2023	640	31.6	6.8	29.5	29.3	27.9	5.7	0.7	33.1	30.2
Chinese Taipei	2019	699	83.4	9.6	82.5	5.4	1.4	0.9	0.2	84.4	82.4
	2023	798	84.5	9.8	84.5	5.3	0.4	0.0	0.0	88.3	81.0
England	2019	468	51.4	14.6	49.7	19.9	12.6	2.8	0.5	50.3	52.8
	2023	597	52.7	12.6	52.2	25.0	9.2	0.8	0.3	49.9	55.5
Finland	2019	695	70.1	7.9	68.3	10.8	10.4	1.6	0.9	72.8	67.4
	2023	833	72.2	7.5	71.5	9.5	10.6	0.5	0.4	75.6	69.1
France	2019	562	38.7	7.2	37.0	35.5	15.9	3.9	0.6	34.8	42.2
	2023	642	44.7	6.3	43.8	29.5	18.4	1.9	0.2	45.4	43.9
Hong Kong SAR	2019	466	67.9	11.5	67.2	13.8	6.4	0.9	0.2	70.8	65.2
	2023	637	65.7	13.0	65.4	14.1	6.9	0.4	0.2	66.1	65.4
Hungary	2019	643	43.8	21.1	43.7	18.1	17.0	0.1	0.0	39.6	48.0
	2023	772	50.2	16.1	50.2	15.3	18.4	0.1	0.0	51.2	49.0
Israel	2019	521	44.5	16.6	43.5	28.4	9.2	2.1	0.3	42.9	46.5
	2023	736	45.3	10.6	44.5	28.8	14.4	1.0	0.8	44.3	46.5
Italy	2019	513	40.7	15.0	39.4	24.9	17.4	2.9	0.2	36.8	44.5
	2023	657	45.6	10.8	45.0	29.3	13.5	1.4	0.0	42.8	48.6
Korea, Rep. of	2019	552	19.3	47.4	19.1	16.3	16.5	0.7	0.0	16.4	21.9
	2023	609	14.2	47.8	14.2	20.4	17.4	0.2	0.0	10.1	17.8
Lithuania	2019	539	27.0	19.9	26.9	26.1	26.8	0.3	0.0	26.3	27.7
	2023	778	28.6	16.2	28.6	28.2	26.9	0.2	0.0	28.6	28.7
Malaysia	2019	1013	38.5	33.5	38.2	12.9	14.7	0.3	0.5	41.3	35.5
	2023	1255	38.1	29.9	38.0	17.9	14.0	0.1	0.2	40.6	35.6
Norway (9)	2019	659	58.0	10.2	56.2	14.4	16.2	2.7	0.4	54.8	60.9
	2023	896	53.6	7.8	51.2	21.8	14.7	3.0	1.6	53.9	53.5
Portugal	2019	487	61.5	18.1	60.8	11.5	8.4	0.6	0.6	61.0	62.0
	2023	784	61.7	16.8	61.4	13.9	7.5	0.4	0.0	62.4	60.9
Qatar	2019	560	44.8	26.1	43.3	15.2	12.0	2.3	1.1	44.4	45.2
	2023	616	40.6	23.8	40.4	23.3	12.0	0.5	0.0	37.3	44.1
Singapore	2019	693	78.5	10.7	78.3	4.8	6.0	0.3	0.0	78.5	78.5
	2023	676	79.3	7.6	79.2	5.9	7.2	0.0	0.1	81.2	77.5
Sweden	2019	577	64.7	10.5	62.2	10.6	12.9	2.5	1.4	64.7	64.7
	2023	714	70.3	6.1	68.3	11.5	11.3	2.0	0.8	71.8	69.0
United Arab Emirates	2019	3157	41.5	16.9	40.7	22.7	17.7	1.5	0.4	39.3	43.5
	2023	4708	50.3	16.1	49.8	21.4	11.6	0.7	0.4	48.8	51.7
United States	2019	1237	44.4	10.3	43.5	28.4	15.8	1.0	0.9	46.8	41.9
	2023	1158	51.9	8.2	51.4	27.4	12.1	0.3	0.7	52.5	51.3
International Avg. (19)	2019	14626	49.7	16.5	48.7	18.2	14.3	1.8	0.5	48.8	50.7
	2023	18506	51.6	14.4	51.0	19.9	13.4	1.0	0.3	51.8	51.5
Abu Dhabi, UAE	2019	1171	40.6	17.0	40.0	23.7	17.8	1.1	0.4	41.1	40.1
	2023	1740	46.8	16.0	46.4	24.6	12.1	0.7	0.2	47.5	46.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Knowing
B_SM2_08 SE62247: Properties of baking soda - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Dubai, UAE	2019	803	53.6	14.1	52.8	17.7	13.9	1.0	0.5	49.1	58.0
	2023	1175	58.0	13.7	57.5	17.1	10.8	0.4	0.6	55.5	60.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing
B_SM2_09 SE62177: Formation of oil - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	37.8	40.1	5.4	13.0	35.5	4.4	1.6	31.5	43.4
	2023	640	40.1	30.0	8.1	19.7	38.7	2.8	0.7	32.5	46.8
Chinese Taipei	2019	699	57.3	28.9	6.2	7.1	56.7	0.8	0.3	54.7	60.0
	2023	798	64.4	23.9	3.6	8.0	64.4	0.0	0.0	57.9	70.5
England	2019	468	40.7	34.0	14.8	8.9	39.6	2.3	0.5	41.1	40.1
	2023	597	43.5	35.7	11.0	9.6	43.4	0.1	0.3	37.7	49.3
Finland	2019	695	39.7	41.7	9.4	7.9	38.8	1.1	1.1	29.7	49.8
	2023	833	35.8	45.9	9.7	8.2	35.6	0.3	0.4	24.0	46.5
France	2019	562	35.1	43.0	6.5	13.5	34.0	2.2	0.8	31.3	38.4
	2023	642	31.7	41.6	7.2	18.9	31.4	0.6	0.2	26.4	37.5
Georgia	2019	461	15.7	49.3	10.5	19.5	14.8	5.3	0.5	13.2	18.1
	2023	690	18.4	52.7	11.4	16.4	18.1	1.3	0.1	19.1	17.7
Hong Kong SAR	2019	466	53.8	15.5	18.4	11.9	53.3	0.8	0.2	50.5	56.9
	2023	637	51.0	23.2	12.6	13.0	50.9	0.2	0.2	42.6	59.3
Hungary	2019	643	47.6	28.2	12.1	11.9	47.5	0.2	0.0	38.2	57.1
	2023	772	45.2	30.5	10.6	13.7	45.2	0.0	0.0	39.2	52.0
Israel	2019	521	40.2	34.5	6.5	17.4	39.2	2.2	0.3	35.7	45.6
	2023	736	31.6	36.4	8.5	22.6	31.2	0.5	0.8	27.6	35.8
Italy	2019	513	48.2	24.9	11.5	14.8	47.7	0.7	0.4	41.7	54.4
	2023	657	54.6	21.5	11.4	12.4	54.5	0.2	0.0	50.9	58.4
Korea, Rep. of	2019	552	44.8	36.6	6.5	11.8	44.7	0.4	0.0	34.9	54.0
	2023	609	37.6	40.9	4.2	17.2	37.6	0.1	0.0	22.8	50.7
Lithuania	2019	539	37.5	39.8	8.2	14.2	37.3	0.4	0.0	33.0	42.3
	2023	778	33.9	40.3	6.2	19.6	33.9	0.0	0.0	28.6	39.2
Malaysia	2019	1013	44.1	22.9	19.2	13.1	43.6	0.7	0.5	42.9	45.3
	2023	1255	34.0	32.5	17.4	15.9	34.0	0.1	0.2	31.6	36.6
Norway (9)	2019	659	59.5	13.7	17.9	7.4	57.2	3.5	0.4	57.2	61.6
	2023	896	56.7	18.3	15.7	8.1	54.9	1.5	1.6	51.0	61.4
Portugal	2019	487	30.0	43.7	7.5	17.8	29.6	0.5	0.9	24.0	36.0
	2023	784	32.1	37.5	8.7	21.5	31.9	0.4	0.0	18.6	46.2
Qatar	2019	560	50.3	23.6	13.6	10.8	48.6	1.5	1.9	47.1	54.0
	2023	616	49.9	24.1	12.8	13.1	49.6	0.5	0.0	50.1	49.6
Singapore	2019	693	45.7	37.7	8.1	8.1	45.2	0.9	0.0	36.6	53.4
	2023	676	49.0	33.3	5.8	11.8	48.9	0.1	0.1	41.7	55.6
Sweden	2019	577	53.4	27.9	11.5	5.7	51.5	1.9	1.5	49.7	57.1
	2023	714	47.3	27.9	18.1	5.7	46.3	1.2	0.8	44.5	49.8
United Arab Emirates	2019	3159	44.7	23.8	18.3	12.0	43.7	1.8	0.6	43.5	45.8
	2023	4708	47.5	24.1	14.6	13.4	47.2	0.4	0.4	44.5	50.4
United States	2019	1237	39.7	37.6	10.1	11.4	38.8	1.2	0.9	34.0	45.7
	2023	1158	39.9	36.0	10.3	13.1	39.5	0.4	0.7	36.1	43.3
International Avg. (20)	2019	15089	43.3	32.4	11.1	11.9	42.4	1.6	0.6	38.5	47.9
	2023	19196	42.2	32.8	10.4	14.1	41.9	0.5	0.3	36.4	47.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Knowing
B_SM2_09 SE62177: Formation of oil - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	39.8	23.2	18.5	16.6	38.5	2.6	0.5	38.7	40.8
	2023	1740	47.7	21.2	13.7	17.0	47.3	0.5	0.3	47.8	47.7
Dubai, UAE	2019	803	45.5	27.7	17.5	8.7	45.0	0.7	0.5	40.8	50.2
	2023	1175	48.7	28.8	14.1	8.0	48.3	0.3	0.6	42.5	54.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing
B_SM2_10 SE62186: Greenhouse on Mars - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chinese Taipei	2019	699	67.9	10.0	67.3	10.2	11.6	0.7	0.3	67.1	68.8
	2023	798	63.6	12.1	63.5	9.8	14.4	0.1	0.0	64.6	62.7
England	2019	468	28.5	21.8	27.4	8.9	38.1	3.3	0.5	25.4	32.6
	2023	597	37.5	19.5	37.1	11.5	30.8	0.8	0.3	32.8	42.2
Finland	2019	695	31.8	19.7	31.1	11.4	35.7	1.0	1.1	30.7	32.9
	2023	833	31.9	22.4	31.5	11.1	33.9	0.6	0.5	27.3	36.0
France	2019	562	32.5	27.4	31.1	14.0	23.1	3.5	0.9	26.0	38.3
	2023	642	30.4	25.9	29.7	15.4	26.6	1.9	0.5	27.5	33.5
Georgia	2019	462	37.9	20.5	35.3	15.7	21.7	5.7	1.0	39.1	36.7
	2023	690	38.5	20.3	37.5	15.7	23.9	2.5	0.1	34.4	42.5
Hong Kong SAR	2019	466	54.9	13.9	54.3	12.8	17.9	0.8	0.2	44.9	64.2
	2023	637	56.9	12.8	56.7	12.2	18.0	0.2	0.2	51.7	62.1
Hungary	2019	643	47.8	22.0	47.1	7.9	21.4	1.5	0.0	44.2	51.4
	2023	772	49.3	23.3	49.2	7.7	19.7	0.1	0.0	42.7	56.7
Israel	2019	521	43.8	16.7	43.3	12.9	25.9	0.9	0.3	43.0	44.9
	2023	736	32.5	21.3	31.8	13.8	31.0	1.3	0.8	25.7	39.7
Italy	2019	513	26.1	28.5	25.3	12.0	31.3	2.5	0.5	19.7	32.1
	2023	657	32.4	28.9	32.0	10.1	27.9	1.1	0.0	30.6	34.2
Korea, Rep. of	2019	552	54.3	18.4	54.2	12.0	15.2	0.2	0.0	54.4	54.3
	2023	609	49.1	18.5	49.1	10.9	21.5	0.1	0.0	41.8	55.5
Lithuania	2019	539	32.4	24.9	32.1	8.7	33.3	0.9	0.0	29.0	36.1
	2023	778	37.5	20.9	37.4	10.8	30.6	0.3	0.0	33.4	41.5
Malaysia	2019	1013	26.9	18.8	26.5	17.1	36.3	0.7	0.7	25.1	28.7
	2023	1255	26.8	22.9	26.7	17.9	32.1	0.2	0.2	26.1	27.6
Norway (9)	2019	659	28.4	21.2	27.7	13.2	35.3	2.3	0.4	26.7	30.1
	2023	896	24.3	22.9	23.2	14.0	35.3	2.9	1.7	20.8	27.2
Portugal	2019	487	36.3	21.0	35.3	13.0	27.9	1.9	0.9	31.1	41.5
	2023	784	33.4	20.9	33.4	16.2	29.5	0.0	0.0	32.6	34.3
Qatar	2019	560	46.8	19.1	44.7	11.6	20.2	2.0	2.3	42.1	52.0
	2023	616	39.9	24.4	39.5	11.0	24.3	0.7	0.1	34.3	45.9
Singapore	2019	693	45.2	13.3	44.9	11.1	30.0	0.6	0.0	38.4	51.1
	2023	676	54.5	9.4	54.3	14.3	21.7	0.2	0.1	50.8	57.9
Sweden	2019	577	29.2	17.9	28.1	14.4	35.9	2.2	1.5	23.7	34.8
	2023	714	28.9	21.1	27.9	14.4	32.9	2.8	0.8	23.4	33.9
United Arab Emirates	2019	3156	39.7	21.4	39.0	15.8	21.9	1.2	0.6	37.2	42.0
	2023	4708	40.0	19.6	39.5	14.0	25.8	0.7	0.5	38.1	41.7
United States	2019	1237	22.0	24.3	21.5	14.9	37.1	1.1	1.1	21.4	22.7
	2023	1158	25.8	22.6	25.6	13.8	37.0	0.3	0.7	22.5	28.9
International Avg. (19)	2019	14502	38.6	20.1	37.7	12.5	27.4	1.7	0.6	35.2	41.8
	2023	18556	38.6	20.5	38.2	12.9	27.2	0.9	0.3	34.8	42.3
Abu Dhabi, UAE	2019	1171	34.9	23.5	34.2	17.2	23.2	1.3	0.6	34.3	35.5
	2023	1740	36.1	20.8	35.6	16.6	25.8	0.8	0.4	34.1	38.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Knowing
B_SM2_10 SE62186: Greenhouse on Mars - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Dubai, UAE	2019	803	47.4	13.0	46.7	14.0	25.0	0.8	0.5	43.7	51.0
	2023	1175	45.5	14.7	44.9	11.3	27.8	0.7	0.6	46.4	44.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Applying
B_SM2_11A SE62211A: Warmest and driest time of year - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	48.9	45.3	43.4	9.3	2.0	49.7	48.2
	2023	640	43.6	48.7	37.7	12.6	0.9	42.6	44.5
Chinese Taipei	2019	699	65.3	33.8	63.4	2.6	0.3	65.3	65.2
	2023	798	68.1	31.7	67.7	0.6	0.0	75.7	61.1
England	2019	468	60.6	37.0	56.9	5.5	0.6	62.6	58.0
	2023	597	54.6	43.1	51.7	4.9	0.3	59.3	49.7
Finland	2019	695	67.9	30.8	65.0	3.2	1.1	74.6	60.9
	2023	833	57.9	40.6	55.8	3.1	0.5	63.2	52.9
France	2019	562	37.9	58.1	35.5	5.5	0.9	38.4	37.5
	2023	642	34.7	61.3	32.5	5.6	0.6	35.3	34.0
Georgia	2019	463	18.3	58.9	13.2	26.8	1.0	17.6	19.0
	2023	690	17.9	71.5	15.6	12.8	0.2	19.5	16.3
Hong Kong SAR	2019	466	50.3	46.6	47.1	6.1	0.2	54.3	46.5
	2023	636	52.9	45.2	50.7	3.9	0.2	51.2	54.5
Hungary	2019	643	54.1	44.6	52.6	2.8	0.0	53.5	54.7
	2023	772	46.7	51.7	45.2	3.1	0.0	52.2	40.4
Israel	2019	521	54.3	42.0	49.8	8.0	0.3	56.1	51.9
	2023	736	50.7	45.3	46.5	7.3	0.9	53.6	47.4
Italy	2019	513	34.7	61.9	32.9	4.6	0.5	29.9	39.5
	2023	657	43.9	53.7	42.0	4.3	0.0	48.4	39.1
Korea, Rep. of	2019	552	46.9	51.0	45.1	3.9	0.0	45.8	48.0
	2023	609	48.7	50.3	47.8	1.8	0.0	48.5	48.9
Lithuania	2019	539	62.9	35.9	60.7	3.4	0.0	65.9	59.7
	2023	778	48.6	49.5	46.9	3.6	0.0	51.3	45.9
Malaysia	2019	1013	35.6	62.4	34.5	2.2	0.9	35.0	36.3
	2023	1255	30.1	68.9	29.6	1.2	0.2	32.8	27.2
Norway (9)	2019	659	55.8	41.2	52.2	6.1	0.5	54.5	57.1
	2023	896	45.2	50.1	41.4	6.7	1.7	49.5	41.7
Portugal	2019	487	57.4	40.9	55.2	3.0	0.9	61.3	53.6
	2023	784	43.8	55.0	42.8	2.2	0.0	47.0	40.2
Qatar	2019	560	35.5	58.9	32.5	5.8	2.9	38.0	32.6
	2023	616	30.3	66.2	28.8	4.6	0.4	30.8	29.7
Singapore	2019	693	69.9	29.8	69.2	0.8	0.1	71.7	68.3
	2023	676	67.2	32.5	66.8	0.5	0.1	67.6	66.9
Sweden	2019	577	54.7	41.8	50.5	6.0	1.7	60.9	48.3
	2023	714	48.4	48.9	45.9	4.3	0.8	53.0	44.3
United Arab Emirates	2019	3158	34.0	60.6	31.2	7.3	0.9	33.9	34.1
	2023	4707	35.1	60.0	32.5	7.0	0.6	35.8	34.5
United States	2019	1237	48.6	49.1	46.5	3.2	1.2	51.9	45.1
	2023	1158	41.9	56.2	40.6	2.5	0.7	40.7	42.9
International Avg. (20)	2019	15090	49.7	46.5	46.9	5.8	0.8	51.0	48.2
	2023	19194	45.5	51.5	43.4	4.6	0.4	47.9	43.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Applying
B_SM2_11A SE62211A: Warmest and driest time of year - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	28.1	64.0	25.0	10.3	0.7	26.8	29.3
	2023	1740	29.4	63.2	26.3	10.0	0.5	30.1	28.7
Dubai, UAE	2019	803	48.9	49.4	47.2	2.9	0.5	49.8	48.0
	2023	1174	49.3	48.4	47.0	3.9	0.7	49.8	48.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Reasoning

B_SM2_11B SE62211B: Climate data are wrong - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	5.0	82.3	4.3	10.5	2.8	4.0	5.9
	2023	640	4.0	84.7	3.6	10.5	1.3	5.4	2.9
Chinese Taipei	2019	699	10.9	86.9	10.6	2.2	0.3	11.2	10.5
	2023	798	4.4	95.3	4.3	0.3	0.0	6.2	2.6
England	2019	468	14.5	78.3	13.3	7.8	0.6	12.6	16.9
	2023	597	12.5	85.5	12.2	2.0	0.4	13.0	11.9
Finland	2019	695	18.7	77.8	17.8	3.1	1.4	21.0	16.3
	2023	833	11.0	87.1	10.8	1.5	0.6	13.5	8.7
France	2019	562	5.7	87.9	5.3	5.4	1.3	6.3	5.2
	2023	642	4.6	90.5	4.3	4.6	0.6	2.4	7.0
Georgia	2019	463	1.2	78.8	0.9	18.5	1.8	1.0	1.3
	2023	690	3.5	87.0	3.1	9.7	0.2	4.0	2.9
Hong Kong SAR	2019	466	5.0	90.7	4.8	4.4	0.2	4.7	5.3
	2023	637	11.0	87.9	10.9	1.1	0.2	13.3	8.8
Hungary	2019	643	10.6	87.9	10.5	1.6	0.1	12.1	9.1
	2023	772	5.2	93.1	5.1	1.8	0.0	6.4	3.8
Israel	2019	521	7.3	89.3	7.1	3.0	0.6	6.4	8.5
	2023	736	6.2	90.6	5.9	2.6	0.9	6.4	5.9
Italy	2019	513	2.3	91.0	2.2	6.4	0.5	1.2	3.4
	2023	657	5.3	90.0	5.1	4.9	0.0	7.7	2.9
Korea, Rep. of	2019	552	20.8	77.4	20.4	2.2	0.0	19.9	21.7
	2023	609	13.0	85.9	12.8	1.2	0.0	15.8	10.6
Lithuania	2019	539	10.0	87.1	9.6	3.2	0.0	11.1	8.8
	2023	778	7.6	91.6	7.6	0.8	0.0	8.6	6.7
Malaysia	2019	1013	8.8	87.9	8.4	2.5	1.1	10.4	7.0
	2023	1255	6.7	92.7	6.6	0.5	0.2	7.5	5.8
Norway (9)	2019	659	11.7	78.4	10.4	10.1	1.1	13.3	10.2
	2023	896	11.1	84.0	10.5	3.8	1.7	10.8	11.3
Portugal	2019	487	3.8	90.8	3.6	4.6	1.1	5.0	2.6
	2023	784	2.7	94.2	2.6	3.1	0.1	2.6	2.9
Qatar	2019	560	5.8	82.8	5.1	9.0	3.2	6.5	4.9
	2023	616	6.2	92.2	6.1	1.3	0.4	7.8	4.5
Singapore	2019	693	17.1	82.7	17.1	0.1	0.1	13.7	20.1
	2023	676	22.9	76.8	22.9	0.2	0.1	22.3	23.5
Sweden	2019	577	10.4	81.4	9.5	7.0	2.1	10.1	10.8
	2023	714	11.4	83.8	10.8	4.4	1.0	12.0	10.8
United Arab Emirates	2019	3159	6.2	87.1	5.7	5.8	1.3	6.5	5.9
	2023	4708	4.4	93.0	4.3	2.1	0.6	4.6	4.2
United States	2019	1237	9.0	87.9	8.7	1.8	1.6	9.5	8.4
	2023	1158	8.8	89.4	8.7	1.0	0.9	8.8	8.9
International Avg. (20)	2019	15091	9.2	84.7	8.8	5.5	1.1	9.3	9.1
	2023	19196	8.1	88.8	7.9	2.9	0.5	9.0	7.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Reasoning

B_SM2_11B SE62211B: Climate data are wrong - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	4.9	90.3	4.7	4.0	1.0	5.0	4.9
	2023	1740	2.3	94.8	2.2	2.3	0.6	3.0	1.6
Dubai, UAE	2019	803	9.9	85.4	9.4	4.5	0.6	10.0	9.9
	2023	1175	8.0	89.1	7.7	2.4	0.8	7.8	8.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Reasoning
B_SM2_13 SE62033: Pressure applied to pistons - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	19.0	72.0	16.9	8.1	3.0	14.7	22.5
	2023	640	12.9	77.9	11.5	9.3	1.3	10.7	14.6
Chinese Taipei	2019	699	32.6	66.8	32.3	0.5	0.3	31.6	33.6
	2023	798	29.7	70.2	29.7	0.0	0.0	28.8	30.6
England	2019	468	27.8	70.0	27.0	2.1	0.9	28.5	26.9
	2023	597	29.3	69.3	28.7	1.6	0.4	23.9	34.5
Finland	2019	695	37.1	61.0	35.9	1.7	1.4	39.4	34.7
	2023	833	30.9	67.7	30.2	1.3	0.8	31.7	30.1
France	2019	562	36.1	61.5	34.7	1.9	1.8	36.6	35.6
	2023	642	28.2	69.6	27.4	2.3	0.8	27.0	29.7
Georgia	2019	463	13.6	75.5	11.9	9.9	2.7	11.8	15.1
	2023	689	12.4	82.2	11.6	5.8	0.3	11.8	12.9
Hong Kong SAR	2019	466	17.9	80.9	17.7	1.0	0.4	16.1	19.7
	2023	637	28.3	71.2	28.1	0.6	0.2	24.9	31.6
Hungary	2019	643	37.1	62.3	36.7	0.9	0.1	35.0	39.2
	2023	772	25.3	74.5	25.2	0.3	0.0	23.9	26.9
Israel	2019	521	47.0	51.9	46.0	1.4	0.6	49.7	43.7
	2023	736	33.8	64.0	32.7	2.5	0.9	37.1	30.3
Italy	2019	513	21.6	75.5	20.8	2.8	0.9	22.9	20.4
	2023	657	21.2	78.0	20.9	0.9	0.2	21.5	20.8
Korea, Rep. of	2019	552	59.3	40.2	58.6	1.2	0.0	59.0	59.6
	2023	609	52.2	47.5	51.8	0.4	0.2	51.9	52.4
Lithuania	2019	539	47.2	52.2	46.7	1.0	0.0	45.8	48.7
	2023	778	33.9	65.4	33.6	1.0	0.0	33.7	34.1
Malaysia	2019	1013	13.5	84.9	13.2	0.6	1.3	13.6	13.4
	2023	1255	5.6	93.7	5.5	0.2	0.6	6.2	4.9
Norway (9)	2019	659	26.1	71.1	25.1	2.7	1.1	23.3	28.8
	2023	896	25.9	70.5	24.7	2.7	2.2	23.9	27.6
Portugal	2019	487	28.1	69.3	27.1	2.5	1.1	31.0	25.3
	2023	784	24.1	75.2	23.8	0.9	0.1	25.2	22.8
Qatar	2019	560	31.6	64.7	29.9	2.3	3.2	31.7	31.5
	2023	616	30.8	68.0	30.2	1.0	0.7	32.6	28.8
Singapore	2019	693	77.2	22.7	76.8	0.3	0.1	76.2	78.1
	2023	676	73.6	26.4	73.5	0.0	0.1	75.8	71.7
Sweden	2019	577	41.2	55.3	38.8	3.5	2.4	43.2	39.2
	2023	714	35.1	62.3	33.7	3.0	1.0	34.9	35.3
United Arab Emirates	2019	3159	21.2	76.5	20.6	1.3	1.5	22.8	19.8
	2023	4708	24.5	74.2	24.1	1.0	0.7	24.7	24.3
United States	2019	1237	26.0	71.5	25.1	1.5	2.0	23.6	28.5
	2023	1158	26.1	72.7	25.7	0.5	1.0	23.7	28.4
International Avg. (20)	2019	15091	33.1	64.3	32.1	2.4	1.2	32.8	33.2
	2023	19195	29.2	69.0	28.6	1.8	0.6	28.7	29.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Reasoning

B_SM2_13 SE62033: Pressure applied to pistons - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	14.2	83.2	13.8	1.8	1.1	13.5	14.8
	2023	1740	16.0	82.3	15.7	1.2	0.8	15.0	17.0
Dubai, UAE	2019	803	35.2	63.6	34.5	1.2	0.7	39.7	30.7
	2023	1175	39.7	59.3	39.0	1.0	0.8	41.4	38.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying

B_SM2_14 SE62037: Toy car powered by battery - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	55.7	52.9	7.6	7.7	26.8	1.6	3.4	52.2	58.8
	2023	640	47.9	46.5	12.0	9.2	29.3	1.3	1.7	45.2	50.3
Chinese Taipei	2019	699	44.7	44.4	1.8	1.4	51.7	0.4	0.3	44.8	44.6
	2023	798	48.8	48.7	2.7	0.9	47.5	0.2	0.0	42.8	54.3
England	2019	468	62.6	61.3	5.1	2.9	28.7	1.1	0.9	62.9	62.1
	2023	597	64.3	63.7	4.9	7.6	22.9	0.4	0.6	65.1	63.5
Finland	2019	695	67.9	66.5	1.3	1.1	29.0	0.4	1.6	67.5	68.4
	2023	833	63.7	63.0	3.4	2.3	30.1	0.3	0.8	59.5	67.6
France	2019	562	40.7	39.4	15.2	7.3	35.0	1.4	1.8	38.3	42.8
	2023	642	38.3	37.5	16.7	9.9	34.0	0.9	1.0	34.0	42.9
Georgia	2019	463	40.8	38.7	8.3	8.2	39.5	2.0	3.2	36.6	44.6
	2023	690	39.2	38.0	9.9	7.9	41.2	2.0	1.0	34.4	43.9
Hong Kong SAR	2019	466	82.0	80.8	2.8	4.5	10.3	1.2	0.4	79.2	84.7
	2023	637	82.4	81.9	2.8	4.0	10.7	0.3	0.3	79.5	85.2
Hungary	2019	643	55.0	54.7	3.8	4.3	36.6	0.4	0.1	47.9	62.1
	2023	772	53.7	53.4	5.5	6.7	33.8	0.4	0.2	48.5	59.6
Israel	2019	521	75.8	74.9	2.5	2.9	18.5	0.5	0.8	74.1	77.8
	2023	736	57.0	56.4	4.9	2.4	35.2	0.1	1.0	52.2	62.2
Italy	2019	513	54.0	52.5	5.3	6.4	33.0	1.4	1.3	49.5	58.4
	2023	657	51.7	51.4	7.0	10.4	30.5	0.3	0.3	50.0	53.5
Korea, Rep. of	2019	552	63.6	63.0	1.3	2.8	31.9	1.1	0.0	60.1	66.9
	2023	609	51.0	50.9	2.5	2.0	44.5	0.0	0.2	49.1	52.7
Lithuania	2019	539	50.9	50.4	6.9	4.9	36.9	0.9	0.0	49.1	52.8
	2023	778	43.6	43.3	7.8	5.9	42.3	0.5	0.2	34.1	53.1
Malaysia	2019	1013	56.3	55.4	11.8	14.1	17.0	0.3	1.3	57.7	54.9
	2023	1255	46.7	46.4	15.5	12.0	25.4	0.1	0.6	46.3	47.2
Norway (9)	2019	659	54.4	52.6	10.0	8.7	25.3	2.0	1.3	51.3	57.4
	2023	896	58.2	56.4	7.0	8.1	25.4	0.4	2.7	54.2	61.7
Portugal	2019	487	47.2	46.3	10.0	12.4	29.4	0.8	1.1	42.5	51.8
	2023	784	36.8	36.6	13.4	18.8	30.7	0.3	0.1	35.3	38.3
Qatar	2019	560	61.6	59.0	4.7	3.4	28.8	0.5	3.7	57.7	65.9
	2023	616	49.2	48.6	5.8	5.2	39.1	0.6	0.7	44.9	53.9
Singapore	2019	693	86.6	86.1	1.2	2.3	9.8	0.3	0.2	83.8	89.0
	2023	676	85.4	85.3	2.0	1.5	11.0	0.0	0.1	83.9	86.8
Sweden	2019	577	58.1	56.1	2.5	3.8	34.1	1.0	2.5	56.3	59.9
	2023	714	58.9	57.6	3.6	3.5	33.1	1.1	1.2	58.7	59.1
United Arab Emirates	2019	3157	48.0	46.7	7.8	7.3	35.5	0.9	1.8	45.4	50.4
	2023	4708	55.4	54.7	6.9	6.6	30.6	0.4	0.8	53.0	57.6
United States	2019	1237	58.4	56.6	3.6	5.0	31.7	0.7	2.4	59.1	57.6
	2023	1158	62.2	61.4	6.2	5.2	25.9	0.2	1.0	57.3	66.7
International Avg. (20)	2019	15089	58.2	56.9	5.7	5.6	29.5	1.0	1.4	55.8	60.5
	2023	19196	54.7	54.1	7.0	6.5	31.2	0.5	0.7	51.4	58.0

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SM2_14 SE62037: Toy car powered by battery - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	42.8	41.9	12.3	9.8	34.0	0.6	1.4	41.3	44.1
	2023	1740	49.9	49.2	10.1	10.2	29.1	0.6	0.8	49.1	50.7
Dubai, UAE	2019	803	58.7	57.4	5.0	6.0	29.3	1.1	1.0	53.1	64.2
	2023	1175	65.7	65.1	3.0	4.4	26.6	0.1	0.8	62.5	68.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SM2_15 SE62242: Waste removed by electromagnet (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	585	80.5	18.0	74.4	3.8	3.8	84.4	77.0
	2023	640	76.9	21.5	71.8	5.0	1.7	76.2	77.5
Chinese Taipei	2019	699	94.4	5.6	93.9	0.2	0.3	95.0	93.7
	2023	798	92.2	7.8	92.2	0.0	0.0	93.5	91.0
England	2019	468	84.3	15.2	82.1	1.5	1.1	86.0	82.1
	2023	597	78.3	21.3	76.9	1.3	0.6	77.3	79.3
Finland	2019	695	87.2	12.4	84.7	1.2	1.6	87.8	86.7
	2023	833	80.1	19.6	79.0	0.7	0.8	80.0	80.2
France	2019	562	78.5	20.4	74.6	2.6	2.5	78.4	78.6
	2023	642	76.3	22.9	73.6	2.3	1.2	73.6	79.2
Georgia	2019	462	61.4	34.2	54.4	7.7	3.7	56.4	66.2
	2023	690	56.8	41.3	54.3	2.8	1.6	56.7	56.9
Hong Kong SAR	2019	466	75.0	24.8	74.2	0.6	0.4	72.6	77.2
	2023	637	81.0	19.0	80.7	0.0	0.3	80.8	81.1
Hungary	2019	643	82.8	17.0	82.0	0.9	0.1	79.3	86.4
	2023	772	77.4	22.6	77.1	0.2	0.2	75.9	79.0
Israel	2019	521	78.0	21.5	76.3	1.2	1.1	78.4	77.6
	2023	736	72.6	26.7	70.7	1.6	1.0	72.3	73.0
Italy	2019	513	74.2	25.2	72.6	0.2	2.0	72.3	76.0
	2023	657	75.7	23.9	74.3	1.3	0.4	79.7	71.6
Korea, Rep. of	2019	552	89.4	10.5	88.7	0.8	0.0	93.2	85.9
	2023	609	84.7	15.1	83.9	0.8	0.2	84.1	85.3
Lithuania	2019	539	81.3	18.6	80.8	0.5	0.2	81.5	81.1
	2023	778	73.3	26.6	73.0	0.2	0.2	73.0	73.6
Malaysia	2019	1013	77.3	22.2	75.4	0.8	1.6	80.2	74.2
	2023	1255	70.0	29.8	69.4	0.2	0.6	71.2	68.7
Norway (9)	2019	659	85.5	14.0	82.1	2.3	1.6	87.1	83.9
	2023	896	75.3	23.4	71.4	2.5	2.7	77.5	73.7
Portugal	2019	487	86.7	13.1	85.2	0.3	1.5	86.2	87.2
	2023	784	80.9	19.0	80.8	0.1	0.1	80.3	81.7
Qatar	2019	560	82.6	16.3	77.3	2.5	3.9	87.5	76.8
	2023	616	79.5	20.3	78.4	0.6	0.8	81.9	76.8
Singapore	2019	693	95.1	4.9	94.5	0.3	0.3	95.2	95.0
	2023	676	93.0	7.0	92.9	0.0	0.1	93.6	92.5
Sweden	2019	577	81.2	17.9	77.4	1.9	2.8	85.9	76.4
	2023	714	76.7	22.6	74.6	1.5	1.3	81.2	72.7
United Arab Emirates	2019	3159	72.6	26.5	70.2	1.1	2.2	75.4	70.0
	2023	4708	74.8	24.7	73.2	1.0	1.0	76.4	73.2
United States	2019	1237	83.7	15.8	81.0	0.5	2.7	84.0	83.3
	2023	1158	79.9	19.8	78.6	0.4	1.1	79.5	80.1
International Avg. (20)	2019	15090	81.6	17.7	79.1	1.5	1.7	82.3	80.8
	2023	19196	77.8	21.7	76.3	1.1	0.8	78.2	77.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SM2_15 SE62242: Waste removed by electromagnet (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	60.0	38.6	57.9	1.8	1.7	61.0	59.1
	2023	1740	65.0	34.1	63.2	1.5	1.2	65.6	64.4
Dubai, UAE	2019	803	83.6	16.1	81.9	0.5	1.5	84.1	83.1
	2023	1175	83.5	16.3	82.2	0.6	0.9	82.3	84.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SM3_01 SE72033: Functions of different types of cells (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	37.1	55.1	12.7	29.9	2.1	0.3	31.7	41.2
	2023	634	33.3	57.3	14.6	25.0	3.0	0.0	28.9	37.9
Chinese Taipei	2019	702	76.6	16.4	13.7	69.3	0.5	0.0	73.2	80.0
	2023	801	82.3	11.8	11.7	76.3	0.2	0.0	80.9	83.6
England	2019	485	53.6	38.1	15.5	45.2	0.3	0.9	56.6	50.3
	2023	596	57.7	35.0	14.4	50.2	0.4	0.0	54.5	61.3
Finland	2019	683	54.3	35.7	19.3	44.3	0.7	0.1	56.0	52.8
	2023	842	44.4	44.8	20.4	33.8	0.8	0.2	44.1	44.8
France	2019	563	36.3	54.0	18.6	26.8	0.7	0.0	32.6	39.9
	2023	637	28.4	63.2	13.6	21.0	2.2	0.0	25.5	30.8
Georgia	2019	472	45.0	40.4	23.2	30.9	5.5	0.0	48.9	41.4
	2023	692	38.2	51.4	18.6	28.2	1.8	0.0	40.6	36.0
Hong Kong SAR	2019	468	56.4	34.5	17.9	47.2	0.2	0.2	53.1	59.5
	2023	635	62.1	27.8	19.8	51.8	0.3	0.2	57.1	66.5
Hungary	2019	636	54.8	35.6	18.7	45.2	0.4	0.0	53.8	55.7
	2023	774	53.4	38.2	16.6	45.1	0.0	0.0	51.3	55.5
Israel	2019	521	50.9	40.5	15.9	42.2	1.4	0.0	50.9	50.8
	2023	745	36.4	55.9	14.2	28.9	0.8	0.2	35.1	37.6
Italy	2019	514	52.0	39.5	16.3	43.5	0.7	0.0	51.2	52.7
	2023	655	56.6	35.6	15.0	48.7	0.7	0.0	53.6	59.5
Korea, Rep. of	2019	555	67.0	25.6	14.5	59.4	0.6	0.0	66.4	67.5
	2023	606	67.6	26.0	12.3	61.0	0.6	0.0	64.9	70.0
Lithuania	2019	551	56.5	35.2	16.0	48.1	0.7	0.0	58.6	53.9
	2023	775	54.4	35.7	19.1	44.4	0.8	0.0	53.3	55.5
Malaysia	2019	1006	23.9	70.2	11.4	18.1	0.3	0.0	22.0	25.8
	2023	1254	18.4	77.5	7.8	14.5	0.2	0.1	17.7	19.2
Norway (9)	2019	655	35.4	55.2	17.4	26.4	0.6	0.4	30.4	39.8
	2023	901	41.3	47.8	19.2	30.7	1.8	0.4	37.6	44.5
Portugal	2019	488	34.7	54.3	21.6	23.8	0.3	0.0	34.8	34.7
	2023	770	32.9	59.6	14.1	25.6	0.7	0.0	29.2	36.4
Qatar	2019	558	36.4	56.3	13.6	29.3	0.8	0.0	34.9	38.2
	2023	611	41.5	50.7	14.3	33.9	1.1	0.0	43.1	40.1
Singapore	2019	683	77.8	15.9	12.4	71.1	0.7	0.0	75.3	79.8
	2023	689	71.1	22.4	13.1	64.5	0.0	0.0	66.6	74.9
Sweden	2019	568	49.2	42.6	14.9	41.1	1.1	0.3	51.5	47.0
	2023	720	51.8	40.0	15.2	43.6	1.1	0.1	50.3	53.1
United Arab Emirates	2019	3169	40.7	53.3	10.5	34.9	1.2	0.0	40.1	41.2
	2023	4674	44.0	49.7	11.7	37.8	0.8	0.1	43.6	44.3
United States	2019	1224	43.5	47.7	17.1	34.7	0.4	0.1	42.6	44.3
	2023	1147	40.8	52.0	13.8	33.6	0.1	0.5	39.1	42.5
International Avg. (20)	2019	15100	49.1	42.3	16.1	40.6	1.0	0.1	48.2	49.8
	2023	19158	47.8	44.1	15.0	39.9	0.9	0.1	45.9	49.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SM3_01 SE72033: Functions of different types of cells (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1173	31.2	63.9	8.2	26.7	1.1	0.0	30.8	31.5
	2023	1723	32.8	61.8	9.6	27.7	0.7	0.2	33.0	32.6
Dubai, UAE	2019	808	57.5	35.8	12.9	50.6	0.6	0.0	57.9	57.0
	2023	1155	61.2	31.8	13.4	54.1	0.7	0.0	58.7	63.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SM3_02 SE72440: Inherited and acquired traits (bird) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	50.2	49.0	49.3	1.4	0.3	44.8	54.2
	2023	634	47.1	50.7	45.2	4.1	0.0	42.5	52.0
Chinese Taipei	2019	702	90.0	9.9	89.9	0.1	0.0	92.3	87.9
	2023	801	84.6	15.4	84.6	0.0	0.0	87.4	82.1
England	2019	485	63.9	34.8	61.7	2.6	0.9	64.1	63.7
	2023	596	61.6	37.7	60.5	1.8	0.0	61.0	62.3
Finland	2019	683	87.9	12.0	86.7	1.2	0.1	90.7	85.1
	2023	842	76.7	22.9	75.1	1.8	0.2	79.5	73.7
France	2019	563	34.0	65.6	33.8	0.6	0.0	29.6	38.1
	2023	637	41.0	57.9	40.2	2.0	0.0	36.4	45.0
Georgia	2019	473	68.2	31.2	67.0	1.7	0.1	71.6	65.2
	2023	692	72.0	27.6	71.0	1.4	0.0	79.3	65.7
Hong Kong SAR	2019	468	46.9	51.9	45.8	2.0	0.2	48.4	45.4
	2023	635	63.8	36.0	63.3	0.4	0.2	67.1	60.7
Hungary	2019	636	87.1	12.9	87.1	0.0	0.0	88.5	85.9
	2023	774	82.3	17.7	82.3	0.0	0.0	85.3	79.3
Israel	2019	521	59.9	39.4	58.7	2.0	0.0	58.0	61.8
	2023	745	58.3	40.7	56.9	2.2	0.2	57.4	59.2
Italy	2019	514	59.5	40.0	58.9	1.1	0.0	56.9	62.1
	2023	655	56.4	43.1	55.7	1.2	0.0	51.5	61.1
Korea, Rep. of	2019	555	75.6	24.3	75.2	0.5	0.0	77.0	74.3
	2023	606	71.7	28.2	71.4	0.4	0.0	76.1	67.8
Lithuania	2019	551	88.5	11.4	88.5	0.1	0.0	91.9	84.5
	2023	775	82.0	17.8	81.2	1.1	0.0	85.0	79.1
Malaysia	2019	1006	12.0	87.8	12.0	0.2	0.0	11.4	12.6
	2023	1254	10.4	89.3	10.3	0.3	0.1	10.5	10.2
Norway (9)	2019	655	52.2	46.1	50.2	3.2	0.4	60.8	44.6
	2023	901	55.0	43.2	52.8	3.4	0.6	60.9	50.0
Portugal	2019	488	44.7	55.3	44.7	0.0	0.0	36.4	53.3
	2023	770	43.3	55.7	42.5	1.8	0.0	40.4	46.2
Qatar	2019	558	38.4	61.3	38.1	0.6	0.0	39.3	37.2
	2023	611	40.1	59.5	39.9	0.5	0.0	40.7	39.7
Singapore	2019	683	45.4	54.5	45.3	0.2	0.1	47.2	43.9
	2023	689	43.7	56.2	43.7	0.1	0.0	46.8	41.1
Sweden	2019	568	77.1	22.7	76.5	0.5	0.3	83.1	71.1
	2023	720	77.6	22.1	76.4	1.4	0.1	82.2	73.6
United Arab Emirates	2019	3173	44.4	55.1	43.9	1.0	0.0	46.0	42.9
	2023	4675	44.5	55.0	44.1	0.7	0.1	46.2	42.8
United States	2019	1224	54.7	44.9	54.2	0.8	0.1	57.1	52.3
	2023	1147	51.8	47.9	51.4	0.2	0.5	54.0	49.5
International Avg. (20)	2019	15105	59.0	40.5	58.4	1.0	0.1	59.8	58.3
	2023	19159	58.2	41.2	57.4	1.2	0.1	59.5	57.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SM3_02 SE72440: Inherited and acquired traits (bird) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	35.1	64.1	34.6	1.3	0.0	35.4	34.7
	2023	1723	36.5	62.7	36.0	1.1	0.2	38.9	34.1
Dubai, UAE	2019	808	59.6	40.3	59.4	0.3	0.0	62.1	57.2
	2023	1155	58.3	41.5	57.9	0.7	0.0	58.0	58.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SM3_03 SE72032: Tube with materials for cellular respiration - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	41.4	39.9	13.8	40.7	3.8	1.5	0.3	38.8	43.6
	2023	634	41.2	37.1	15.5	39.7	4.1	3.6	0.0	37.9	44.6
Chinese Taipei	2019	702	71.1	21.4	4.7	71.0	2.7	0.1	0.0	70.7	71.5
	2023	801	66.4	25.1	5.4	66.4	3.0	0.0	0.0	62.1	70.1
England	2019	485	54.2	32.0	7.6	52.3	4.7	2.3	1.1	50.3	58.4
	2023	596	52.4	34.7	8.8	51.6	3.3	1.5	0.0	51.4	53.7
Finland	2019	683	36.4	34.9	20.3	36.1	8.0	0.6	0.1	34.7	38.0
	2023	842	36.6	23.2	23.8	36.0	15.5	1.3	0.2	37.3	35.9
France	2019	563	41.5	40.7	10.3	41.2	6.9	0.9	0.0	38.2	44.6
	2023	637	42.7	36.9	12.7	42.2	7.0	1.2	0.0	37.8	46.9
Georgia	2019	473	44.5	33.7	14.2	43.3	6.1	2.6	0.1	43.3	45.5
	2023	692	45.0	32.0	16.4	44.1	5.4	2.1	0.0	46.8	43.5
Hong Kong SAR	2019	468	59.1	19.4	13.1	58.9	8.3	0.2	0.2	59.1	59.1
	2023	635	65.4	18.5	9.5	64.8	6.3	0.8	0.2	61.9	68.6
Hungary	2019	636	49.5	14.6	19.6	49.4	16.2	0.2	0.0	44.5	54.2
	2023	774	57.2	12.5	16.1	56.9	14.0	0.4	0.0	52.3	62.0
Israel	2019	521	41.9	36.0	15.2	41.0	5.6	2.2	0.0	43.7	39.9
	2023	745	38.8	36.6	16.4	38.0	7.0	1.8	0.2	38.2	39.4
Italy	2019	514	46.3	30.1	15.0	45.7	8.1	1.2	0.0	46.2	46.3
	2023	655	51.3	27.7	13.8	51.1	7.0	0.4	0.0	47.7	54.7
Korea, Rep. of	2019	555	59.0	28.5	9.2	58.8	3.2	0.3	0.0	56.9	60.8
	2023	606	60.6	29.0	7.4	60.4	2.8	0.4	0.0	60.1	61.1
Lithuania	2019	551	53.9	30.0	10.1	53.4	5.6	0.9	0.0	53.3	54.7
	2023	775	49.5	31.7	13.7	49.3	4.7	0.6	0.0	47.3	51.7
Malaysia	2019	1006	41.6	37.5	16.1	41.6	4.7	0.0	0.0	36.1	47.0
	2023	1254	38.7	34.1	19.8	38.7	7.2	0.1	0.1	35.4	42.5
Norway (9)	2019	655	38.2	37.9	15.6	37.1	6.4	2.5	0.4	38.3	38.2
	2023	901	44.4	37.5	13.3	43.6	3.8	1.0	0.8	41.5	46.9
Portugal	2019	488	60.8	21.5	8.8	60.6	8.8	0.4	0.0	60.5	61.1
	2023	770	53.6	27.2	11.8	53.6	7.4	0.0	0.0	54.8	52.4
Qatar	2019	558	40.3	28.3	22.1	39.7	8.4	1.5	0.0	39.4	41.4
	2023	611	45.9	31.2	15.9	45.5	6.6	0.7	0.0	51.0	41.5
Singapore	2019	683	70.0	18.0	7.5	69.8	4.4	0.2	0.1	65.9	73.3
	2023	689	72.3	15.9	6.3	72.1	5.6	0.1	0.0	71.5	72.9
Sweden	2019	568	44.2	36.8	13.0	43.5	5.2	1.3	0.3	45.4	43.0
	2023	720	45.1	39.1	11.5	44.4	3.4	1.4	0.1	38.0	51.4
United Arab Emirates	2019	3173	45.2	29.3	18.2	44.6	6.5	1.3	0.0	43.6	46.6
	2023	4675	48.9	30.6	14.0	48.6	6.1	0.5	0.2	46.0	51.7
United States	2019	1224	40.8	38.1	14.2	40.2	6.1	1.2	0.2	40.2	41.4
	2023	1147	46.0	33.0	15.0	45.6	5.6	0.3	0.5	44.9	47.1
International Avg. (20)	2019	15105	49.0	30.4	13.4	48.4	6.5	1.1	0.1	47.5	50.4
	2023	19159	50.1	29.7	13.4	49.6	6.3	0.9	0.1	48.2	51.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying

B_SM3_03 SE72032: Tube with materials for cellular respiration - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	40.6	27.5	23.0	40.3	8.5	0.7	0.0	39.8	41.3
	2023	1723	41.5	31.6	19.1	41.3	7.6	0.2	0.2	39.1	43.9
Dubai, UAE	2019	808	53.5	29.8	12.3	53.0	3.9	1.1	0.0	52.8	54.2
	2023	1155	60.3	25.3	10.0	60.0	4.3	0.5	0.0	56.7	63.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Reasoning
B_SM3_04 SE72031: Plant heights in woodlice habitats - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	38.5	14.1	30.3	16.0	37.9	1.4	0.3	42.8	35.4
	2023	634	27.9	20.6	31.5	18.4	27.2	1.9	0.3	27.7	28.0
Chinese Taipei	2019	702	37.6	19.3	12.1	31.1	37.6	0.0	0.0	34.8	40.2
	2023	801	37.2	19.4	10.8	32.7	37.2	0.0	0.0	32.0	41.7
England	2019	485	33.8	15.1	22.4	26.6	32.7	2.0	1.1	33.8	33.7
	2023	596	34.3	15.1	25.3	23.9	33.6	1.4	0.7	32.7	36.3
Finland	2019	683	41.9	16.6	18.5	21.5	40.9	2.4	0.1	41.9	41.9
	2023	842	32.1	22.1	20.4	24.7	31.7	0.9	0.2	36.1	27.9
France	2019	563	18.1	35.2	19.8	25.6	17.8	1.5	0.0	17.0	19.1
	2023	637	18.5	29.7	25.1	25.7	18.3	1.3	0.0	17.7	19.2
Georgia	2019	474	22.0	24.8	27.9	21.6	20.9	4.7	0.1	20.7	23.1
	2023	692	25.5	25.8	25.7	22.1	25.2	1.2	0.0	32.1	19.7
Hong Kong SAR	2019	468	42.4	13.9	18.4	24.7	42.0	0.8	0.2	40.9	43.8
	2023	635	48.0	13.1	14.8	23.7	47.6	0.0	0.8	43.4	52.1
Hungary	2019	636	24.6	24.2	30.8	20.0	24.5	0.5	0.0	24.1	25.1
	2023	774	18.1	33.8	36.6	11.4	18.1	0.0	0.0	16.4	19.8
Israel	2019	521	41.9	11.9	23.5	21.6	41.2	1.8	0.0	40.0	44.0
	2023	745	35.2	17.5	26.2	20.4	34.8	1.0	0.2	35.1	35.3
Italy	2019	514	35.1	12.9	31.9	19.6	34.9	0.7	0.0	37.9	32.4
	2023	655	37.4	17.0	28.3	17.1	37.3	0.3	0.0	37.9	36.8
Korea, Rep. of	2019	555	32.2	20.7	22.3	24.5	32.1	0.3	0.0	30.4	33.8
	2023	606	24.3	27.3	21.8	26.3	24.2	0.4	0.0	21.1	27.2
Lithuania	2019	551	52.0	9.3	22.3	16.0	51.6	0.9	0.0	57.5	45.1
	2023	733	47.0	15.6	24.3	13.0	46.9	0.1	0.0	45.6	48.4
Malaysia	2019	1006	45.7	12.9	19.9	21.2	45.4	0.7	0.0	47.2	44.2
	2023	1254	38.7	16.3	23.2	21.8	38.7	0.0	0.1	43.5	33.2
Norway (9)	2019	655	35.1	20.9	26.6	15.6	34.1	2.3	0.4	34.6	35.6
	2023	901	37.7	20.1	25.8	15.2	37.0	1.0	0.8	38.2	37.3
Portugal	2019	488	47.0	11.2	25.1	16.6	46.9	0.2	0.0	43.0	51.2
	2023	770	44.3	11.1	24.7	19.9	44.3	0.1	0.0	42.7	46.0
Qatar	2019	558	38.2	15.1	24.0	21.1	37.3	2.5	0.0	42.8	32.9
	2023	611	37.6	18.8	25.4	18.0	37.4	0.4	0.0	40.0	35.5
Singapore	2019	683	70.4	6.1	8.7	14.5	69.9	0.7	0.1	70.2	70.6
	2023	689	69.9	5.3	11.3	13.5	69.9	0.0	0.0	70.5	69.3
Sweden	2019	568	39.9	14.0	15.5	28.6	38.6	2.9	0.3	40.1	39.6
	2023	720	44.0	15.2	15.6	24.5	43.5	1.0	0.1	44.1	44.0
United Arab Emirates	2019	3170	37.9	17.8	20.9	22.3	37.3	1.7	0.0	40.1	36.0
	2023	4675	40.0	16.0	21.4	22.3	39.7	0.5	0.2	40.4	39.5
United States	2019	1224	29.7	19.8	22.8	27.0	29.3	0.7	0.3	31.9	27.2
	2023	1147	25.4	20.4	24.7	29.0	25.2	0.2	0.5	26.8	23.9
International Avg. (20)	2019	15103	38.2	16.8	22.2	21.8	37.6	1.4	0.2	38.6	37.7
	2023	19117	36.1	19.0	23.1	21.2	35.9	0.6	0.2	36.2	36.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Reasoning
B_SM3_04 SE72031: Plant heights in woodlice habitats - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1173	26.8	22.6	26.9	22.0	26.2	2.3	0.0	27.9	25.8
	2023	1723	33.8	19.2	23.5	23.1	33.6	0.4	0.2	35.6	31.9
Dubai, UAE	2019	808	51.7	11.4	14.7	21.9	51.5	0.4	0.0	51.4	52.0
	2023	1155	46.5	12.1	17.0	24.1	46.3	0.4	0.0	45.9	46.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SM3_05 SE72086: Place organisms in energy pyramid - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	66.0	33.5	65.0	1.2	0.3	51.5	77.1
	2023	634	56.8	42.5	56.0	1.1	0.3	47.0	67.2
Chinese Taipei	2019	702	91.3	8.7	91.3	0.0	0.0	89.5	93.0
	2023	801	88.0	12.0	88.0	0.0	0.0	86.3	89.4
England	2019	485	75.0	24.5	73.6	0.7	1.1	72.0	78.4
	2023	596	79.5	20.1	78.2	0.9	0.7	72.9	87.4
Finland	2019	683	63.6	35.7	62.5	1.2	0.6	60.0	67.2
	2023	842	59.1	40.6	58.6	0.7	0.2	53.6	64.8
France	2019	563	61.1	38.5	60.5	0.9	0.0	52.7	69.0
	2023	637	59.9	39.9	59.5	0.7	0.0	52.8	65.9
Georgia	2019	472	44.3	54.5	43.4	2.0	0.1	33.3	54.2
	2023	692	48.1	51.2	47.5	1.4	0.0	43.3	52.3
Hong Kong SAR	2019	468	75.6	24.2	75.1	0.4	0.2	73.7	77.5
	2023	635	73.7	26.0	72.9	0.3	0.8	70.7	76.4
Hungary	2019	636	75.5	24.5	75.4	0.1	0.0	71.4	79.3
	2023	774	79.7	20.3	79.7	0.0	0.0	72.2	87.2
Israel	2019	521	71.7	28.2	71.3	0.5	0.0	68.9	74.6
	2023	745	65.7	34.1	65.5	0.2	0.2	60.7	70.6
Italy	2019	514	60.2	39.3	59.4	1.3	0.0	56.2	64.1
	2023	655	65.8	34.2	65.8	0.0	0.0	61.1	70.2
Korea, Rep. of	2019	555	93.0	6.9	92.6	0.4	0.0	91.0	94.9
	2023	606	91.7	8.3	91.5	0.2	0.0	88.7	94.4
Lithuania	2019	551	61.2	38.4	60.6	1.0	0.0	52.2	72.3
	2023	775	66.6	33.3	66.5	0.1	0.0	58.6	74.4
Malaysia	2019	1006	65.5	34.4	65.3	0.2	0.0	61.1	69.7
	2023	1254	60.8	39.2	60.8	0.0	0.1	53.8	68.8
Norway (9)	2019	655	64.9	34.2	63.3	2.1	0.4	57.2	71.7
	2023	901	71.8	27.8	70.9	0.4	0.8	68.6	74.7
Portugal	2019	488	79.7	20.3	79.6	0.1	0.0	73.1	86.5
	2023	770	72.8	27.1	72.5	0.4	0.0	61.7	83.6
Qatar	2019	558	54.7	45.0	54.3	0.8	0.0	49.3	61.0
	2023	611	67.0	33.0	66.8	0.0	0.2	60.8	72.2
Singapore	2019	683	73.2	26.7	73.1	0.2	0.1	68.1	77.4
	2023	689	80.1	19.9	80.1	0.0	0.0	74.8	84.8
Sweden	2019	568	73.8	25.8	72.7	1.1	0.4	70.9	76.7
	2023	720	78.0	21.7	77.3	0.9	0.1	72.4	83.0
United Arab Emirates	2019	3174	62.4	37.4	61.9	0.7	0.0	53.3	70.4
	2023	4675	69.2	30.6	68.6	0.7	0.2	61.7	76.5
United States	2019	1224	81.6	18.3	81.1	0.3	0.3	77.5	85.8
	2023	1147	82.2	17.7	81.4	0.4	0.5	79.5	84.9
International Avg. (20)	2019	15105	69.7	30.0	69.1	0.8	0.2	64.1	75.0
	2023	19159	70.8	29.0	70.4	0.4	0.2	65.1	76.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SM3_05 SE72086: Place organisms in energy pyramid - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	53.1	46.3	52.5	1.2	0.0	44.4	61.3
	2023	1723	64.5	35.3	64.2	0.3	0.2	57.5	71.6
Dubai, UAE	2019	808	76.8	23.1	76.8	0.1	0.0	70.5	82.7
	2023	1155	81.3	18.3	79.8	1.8	0.0	74.3	87.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SM3_06 SE72005: Differences between tuna and dolphins - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	26.3	46.7	22.2	9.5	21.3	0.3	28.7	24.4
	2023	634	18.6	56.3	17.6	6.1	19.7	0.3	14.9	22.1
Chinese Taipei	2019	702	45.7	32.0	38.8	23.9	5.4	0.0	47.9	43.5
	2023	801	24.2	63.9	20.4	13.4	2.3	0.0	26.9	21.8
England	2019	485	38.0	38.3	29.6	17.8	13.2	1.1	40.6	35.1
	2023	596	39.1	39.5	27.4	20.4	12.0	0.7	37.5	41.0
Finland	2019	683	42.9	35.7	30.1	23.1	10.5	0.6	46.1	39.6
	2023	842	33.5	44.2	29.0	15.1	11.5	0.2	37.2	29.5
France	2019	563	33.8	38.6	30.7	12.2	18.5	0.0	34.7	32.9
	2023	637	33.6	39.8	28.0	13.3	18.9	0.0	35.7	31.7
Georgia	2019	474	27.2	50.6	9.2	16.0	23.8	0.4	24.6	29.4
	2023	692	27.2	42.5	21.3	9.2	27.0	0.0	30.7	24.0
Hong Kong SAR	2019	468	40.7	39.7	27.8	23.0	9.3	0.2	43.6	38.0
	2023	635	39.4	40.3	28.0	21.3	9.6	0.8	44.8	34.1
Hungary	2019	636	43.5	33.8	35.6	21.9	8.7	0.0	41.9	44.8
	2023	774	37.0	35.4	37.2	13.1	14.4	0.0	40.3	33.7
Israel	2019	521	43.0	32.5	30.4	20.8	16.3	0.0	38.4	47.9
	2023	745	33.3	45.5	23.5	16.8	14.1	0.2	32.8	33.8
Italy	2019	514	47.9	24.5	40.7	20.9	13.9	0.0	48.5	47.5
	2023	655	41.3	31.5	36.3	16.8	15.5	0.0	42.1	40.6
Korea, Rep. of	2019	555	44.9	33.1	36.2	23.6	7.0	0.0	43.3	46.3
	2023	606	33.0	50.2	23.0	18.8	8.0	0.0	34.6	31.6
Lithuania	2019	551	43.9	34.3	26.6	23.9	15.1	0.0	44.7	42.7
	2023	775	39.3	38.0	25.2	20.2	16.6	0.0	43.1	35.5
Malaysia	2019	1006	30.9	56.3	21.3	19.3	3.1	0.0	34.6	27.3
	2023	1254	39.1	53.4	11.8	32.2	2.5	0.1	41.3	36.7
Norway (9)	2019	655	38.0	35.9	29.8	16.2	17.4	0.6	41.4	35.1
	2023	901	36.8	40.0	29.2	17.2	12.8	0.8	35.2	38.3
Portugal	2019	488	40.8	38.1	27.6	22.0	12.3	0.0	41.8	39.8
	2023	770	38.5	39.9	24.8	20.4	15.0	0.0	37.1	39.8
Qatar	2019	558	31.1	46.1	29.6	12.6	11.7	0.0	31.3	30.8
	2023	610	27.5	53.3	27.4	11.7	7.3	0.2	30.9	24.6
Singapore	2019	683	74.3	13.0	24.5	60.8	1.5	0.1	75.8	73.1
	2023	689	66.6	19.9	26.8	53.0	0.3	0.0	65.9	67.2
Sweden	2019	568	48.3	25.1	39.1	22.3	13.1	0.4	54.0	42.8
	2023	720	37.6	35.0	41.1	12.9	10.9	0.1	38.1	37.2
United Arab Emirates	2019	3173	31.9	50.3	25.9	16.7	7.1	0.0	33.4	30.6
	2023	4675	36.1	46.6	27.4	20.3	5.5	0.2	37.1	35.0
United States	2019	1224	44.2	37.0	33.3	25.8	3.7	0.3	46.1	42.1
	2023	1147	37.9	43.5	32.2	20.3	3.4	0.6	39.9	35.8
International Avg. (20)	2019	15106	40.9	37.1	29.5	21.6	11.6	0.2	42.1	39.7
	2023	19158	36.0	42.9	26.9	18.6	11.4	0.2	37.3	34.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SM3_06 SE72005: Differences between tuna and dolphins - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	24.1	59.7	20.1	12.2	8.1	0.0	25.0	23.3
	2023	1723	26.7	57.9	21.9	14.1	5.9	0.2	27.4	25.9
Dubai, UAE	2019	808	44.8	36.0	33.7	26.0	4.4	0.0	47.8	41.9
	2023	1155	49.8	30.8	32.9	30.5	5.8	0.0	49.8	49.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Reasoning
B_SM3_08 SE72123: Properties of liquid in thermometer - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	69.6	13.0	67.0	7.7	8.6	2.9	0.8	69.0	70.0
	2023	634	66.4	11.8	64.0	11.5	9.0	3.1	0.5	64.7	68.2
Chinese Taipei	2019	702	77.0	15.3	76.8	2.9	4.8	0.2	0.0	74.9	79.0
	2023	801	80.4	11.9	80.4	3.6	4.0	0.0	0.0	77.7	82.8
England	2019	485	60.4	15.9	58.2	10.9	11.3	2.3	1.4	59.5	61.5
	2023	596	64.9	16.5	64.1	9.2	9.0	0.4	0.8	64.7	65.2
Finland	2019	683	64.4	21.6	63.7	7.3	6.4	0.4	0.6	63.1	65.6
	2023	842	66.3	20.4	65.7	6.1	6.9	0.7	0.2	67.8	64.8
France	2019	563	53.5	23.9	52.5	7.0	14.7	1.9	0.0	48.3	58.5
	2023	637	54.0	22.2	53.4	7.0	16.2	1.1	0.0	56.0	52.5
Georgia	2019	472	50.7	23.9	49.3	9.5	14.6	2.4	0.4	48.9	52.2
	2023	692	62.4	14.5	61.6	9.4	13.3	1.0	0.3	61.8	62.8
Hong Kong SAR	2019	468	61.1	23.6	60.7	6.3	8.8	0.4	0.2	63.6	58.7
	2023	635	65.1	19.2	64.6	6.2	9.2	0.0	0.8	62.3	67.6
Hungary	2019	636	70.4	20.6	70.1	5.4	3.4	0.4	0.0	70.4	70.4
	2023	774	69.3	19.5	69.3	6.2	5.0	0.0	0.0	70.0	68.6
Israel	2019	521	59.4	25.3	58.7	7.7	7.1	1.3	0.0	60.9	57.9
	2023	745	54.2	19.6	53.5	12.9	12.6	1.2	0.2	58.1	50.6
Italy	2019	514	77.5	7.5	77.1	6.1	8.7	0.4	0.2	80.5	74.7
	2023	655	75.8	6.9	75.5	7.2	10.1	0.3	0.0	77.2	74.3
Korea, Rep. of	2019	555	65.1	9.6	64.8	11.1	14.0	0.5	0.0	59.4	70.3
	2023	606	61.7	14.6	61.4	11.0	12.5	0.4	0.0	57.9	65.0
Lithuania	2019	551	64.9	18.2	64.9	6.9	10.0	0.0	0.0	64.4	65.4
	2023	775	64.6	17.4	64.5	8.4	9.5	0.2	0.0	64.0	65.3
Malaysia	2019	1006	48.6	32.1	48.2	5.8	13.1	0.3	0.5	50.0	47.2
	2023	1254	39.5	30.9	39.4	8.7	20.9	0.1	0.1	37.7	41.4
Norway (9)	2019	655	51.2	31.7	50.0	5.7	10.3	1.5	0.8	50.4	51.8
	2023	901	56.8	26.8	56.0	6.0	9.9	0.4	0.9	58.9	54.9
Portugal	2019	488	70.7	11.8	70.3	6.5	10.8	0.6	0.0	72.3	68.9
	2023	769	68.1	12.2	68.0	9.4	10.2	0.3	0.0	66.6	69.6
Qatar	2019	558	59.7	17.3	58.8	7.8	14.6	1.3	0.1	57.4	62.3
	2023	611	52.7	20.4	51.9	7.5	18.7	1.2	0.2	56.5	49.3
Singapore	2019	683	76.8	12.5	76.4	2.9	7.7	0.4	0.1	70.0	82.3
	2023	689	76.0	13.3	75.8	4.4	6.2	0.1	0.1	76.0	76.0
Sweden	2019	568	53.6	29.0	52.1	7.7	8.4	1.9	0.8	50.5	56.7
	2023	720	53.5	25.3	52.9	9.9	10.6	1.2	0.1	49.2	57.2
United Arab Emirates	2019	3169	64.0	15.7	63.4	10.0	10.0	0.9	0.0	64.5	63.6
	2023	4675	66.5	13.6	66.1	9.7	10.0	0.3	0.3	66.6	66.4
United States	2019	1224	62.0	14.4	61.2	10.1	13.0	0.9	0.4	62.3	61.6
	2023	1147	58.9	15.5	58.3	12.0	13.1	0.1	1.0	60.4	57.3
International Avg. (20)	2019	15100	63.0	19.1	62.2	7.3	10.0	1.0	0.3	62.0	63.9
	2023	19158	62.9	17.6	62.3	8.3	10.8	0.6	0.3	62.7	63.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Reasoning

B_SM3_08 SE72123: Properties of liquid in thermometer - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1173	59.0	15.0	58.4	13.8	11.9	0.9	0.1	59.0	58.9
	2023	1723	56.6	16.7	56.3	13.8	12.6	0.2	0.4	57.6	55.6
Dubai, UAE	2019	808	68.4	16.0	68.0	8.1	7.4	0.5	0.0	68.5	68.2
	2023	1155	73.7	11.7	73.3	6.9	7.7	0.4	0.0	73.5	73.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Knowing
B_SM3_09 SE72116: Elements in Group 7 - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	59.9	58.0	11.0	16.1	11.7	2.2	0.8	61.0	59.2
	2023	634	55.5	53.3	15.1	16.5	11.2	3.5	0.5	57.6	53.3
Chinese Taipei	2019	702	62.1	61.8	13.9	15.5	8.4	0.5	0.0	60.9	63.3
	2023	801	71.1	71.1	8.2	11.5	9.3	0.0	0.0	71.6	70.6
England	2019	485	46.6	45.4	14.4	17.9	19.7	1.2	1.4	47.4	45.7
	2023	596	49.6	49.0	12.8	20.1	16.9	0.4	0.8	48.9	50.4
Finland	2019	683	32.8	32.3	3.2	55.0	8.0	0.8	0.6	36.4	29.2
	2023	842	31.9	31.6	6.1	52.8	8.7	0.6	0.2	31.2	32.5
France	2019	563	41.7	40.3	19.0	12.8	24.6	3.2	0.1	40.0	43.3
	2023	637	44.7	43.8	18.8	16.1	19.2	2.1	0.0	45.8	43.9
Georgia	2019	473	38.6	36.6	13.0	25.0	20.2	4.9	0.4	40.8	36.7
	2023	692	41.7	41.0	13.9	26.9	16.4	1.5	0.3	40.0	43.2
Hong Kong SAR	2019	468	47.5	46.7	18.5	20.3	12.9	1.3	0.2	48.2	46.7
	2023	635	53.6	52.9	16.5	14.0	15.2	0.7	0.8	54.3	53.1
Hungary	2019	636	44.6	44.5	5.7	42.4	7.2	0.2	0.0	45.3	44.0
	2023	774	43.7	43.7	8.9	39.4	8.1	0.0	0.0	47.8	39.6
Israel	2019	521	63.2	62.9	14.5	16.4	5.6	0.5	0.0	66.0	60.1
	2023	745	58.3	57.7	17.9	16.1	7.2	0.8	0.3	60.9	55.9
Italy	2019	514	44.2	43.5	11.5	21.4	22.0	1.4	0.2	44.8	43.7
	2023	655	45.8	45.1	13.1	20.6	19.8	1.4	0.0	44.4	47.1
Korea, Rep. of	2019	555	25.7	25.6	13.9	41.7	18.4	0.3	0.0	29.1	22.8
	2023	606	39.1	39.0	14.0	21.0	25.8	0.2	0.0	34.3	43.3
Lithuania	2019	551	56.3	56.0	10.0	24.3	9.1	0.6	0.0	60.3	51.4
	2023	775	51.5	51.4	10.8	27.1	10.6	0.1	0.0	54.4	48.7
Malaysia	2019	1006	37.4	37.1	19.1	20.1	22.8	0.4	0.5	39.3	35.6
	2023	1254	36.5	36.4	21.1	18.6	23.7	0.1	0.1	37.4	35.4
Norway (9)	2019	655	25.1	24.0	10.4	43.0	18.5	3.1	0.9	24.4	25.7
	2023	901	28.7	28.3	13.4	40.9	15.9	0.5	0.9	28.9	28.5
Portugal	2019	488	50.5	49.9	13.5	22.9	12.5	1.2	0.0	50.8	50.2
	2023	770	47.4	47.2	12.9	26.9	12.5	0.4	0.0	51.1	43.9
Qatar	2019	558	41.1	40.1	17.8	20.1	19.6	2.3	0.1	42.7	39.2
	2023	611	51.1	50.5	15.3	18.0	14.9	1.1	0.2	51.5	50.8
Singapore	2019	683	62.1	61.9	14.1	14.0	9.7	0.2	0.1	63.1	61.3
	2023	689	60.9	60.8	15.6	13.1	10.4	0.0	0.1	58.3	63.1
Sweden	2019	568	36.5	35.4	13.7	30.9	17.0	2.3	0.8	37.3	35.6
	2023	720	37.3	36.8	14.3	33.2	14.5	1.1	0.1	39.3	35.4
United Arab Emirates	2019	3170	41.0	40.5	14.5	25.6	18.0	1.2	0.1	41.7	40.4
	2023	4674	51.9	51.5	13.8	19.5	14.3	0.6	0.3	51.2	52.6
United States	2019	1224	53.8	53.1	14.3	19.6	11.8	0.7	0.4	55.8	51.6
	2023	1147	57.5	56.8	13.8	19.0	9.1	0.3	1.1	59.1	55.9
International Avg. (20)	2019	15102	45.5	44.8	13.3	25.3	14.9	1.4	0.3	46.8	44.3
	2023	19158	47.9	47.4	13.8	23.6	14.2	0.8	0.3	48.4	47.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Knowing
B_SM3_09 SE72116: Elements in Group 7 - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	36.5	35.9	16.9	27.1	18.6	1.5	0.1	39.1	34.0
	2023	1723	44.4	44.1	19.2	19.6	16.4	0.3	0.4	44.4	44.3
Dubai, UAE	2019	808	56.2	55.8	11.2	18.5	13.8	0.7	0.0	57.2	55.3
	2023	1155	62.1	61.7	8.8	17.5	11.4	0.5	0.0	62.2	61.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Applying
B_SM3_10 SE72920: Burn rates for different logs - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	29.9	41.9	54.3	2.3	0.7	0.8	31.4	28.8
	2023	634	32.4	38.0	57.0	3.3	1.2	0.5	32.6	32.1
Chinese Taipei	2019	702	72.3	22.5	10.2	67.0	0.3	0.0	72.5	72.0
	2023	800	72.2	22.2	11.1	66.7	0.0	0.0	74.5	70.2
England	2019	485	27.8	50.7	39.8	7.3	0.8	1.4	30.4	25.0
	2023	596	32.2	45.0	44.1	9.8	0.3	0.8	31.1	33.5
Finland	2019	683	40.7	28.7	60.2	10.2	0.3	0.6	43.9	37.5
	2023	842	38.0	35.2	52.6	11.4	0.6	0.2	40.0	35.8
France	2019	563	31.0	40.2	56.4	2.5	0.8	0.1	33.3	28.7
	2023	637	31.7	38.2	59.4	1.9	0.5	0.0	33.0	30.6
Georgia	2019	474	25.6	50.8	44.4	2.9	1.5	0.4	27.1	24.2
	2023	692	25.2	51.6	46.0	2.1	0.1	0.3	29.8	21.2
Hong Kong SAR	2019	468	36.4	43.5	38.9	16.5	0.8	0.2	36.6	36.1
	2023	635	36.7	44.3	36.8	17.9	0.2	0.8	36.2	37.2
Hungary	2019	636	32.4	44.0	47.2	8.8	0.0	0.0	32.9	31.9
	2023	774	24.4	57.2	36.6	6.0	0.2	0.0	25.6	23.2
Israel	2019	521	37.5	34.1	56.3	9.2	0.4	0.0	37.3	37.6
	2023	745	30.2	44.9	48.8	5.6	0.4	0.4	31.5	28.9
Italy	2019	514	28.4	43.9	52.3	1.6	2.0	0.2	29.2	27.6
	2023	654	29.3	41.9	55.0	1.3	0.8	1.1	30.8	28.0
Korea, Rep. of	2019	555	42.2	29.4	56.3	13.9	0.4	0.0	41.1	43.2
	2023	606	33.5	44.0	44.6	11.2	0.2	0.0	34.3	32.9
Lithuania	2019	551	36.9	32.7	60.2	6.6	0.5	0.0	38.8	34.4
	2023	775	32.2	42.6	49.9	7.1	0.4	0.0	33.5	31.0
Malaysia	2019	1006	34.5	43.5	43.6	12.5	0.0	0.5	34.8	34.2
	2023	1254	31.0	40.7	56.7	2.6	0.0	0.1	32.6	29.0
Norway (9)	2019	655	29.7	46.9	43.4	7.3	1.5	0.9	30.3	29.2
	2023	901	27.8	53.1	36.4	9.2	0.4	0.9	30.8	25.1
Portugal	2019	488	42.0	33.2	49.5	17.2	0.1	0.0	43.2	40.7
	2023	770	33.2	39.5	54.3	6.0	0.2	0.0	32.0	34.4
Qatar	2019	558	23.3	58.6	35.1	5.5	0.6	0.1	23.2	23.3
	2023	611	24.4	55.0	40.8	4.0	0.1	0.2	27.0	22.3
Singapore	2019	683	62.8	26.5	21.2	52.0	0.2	0.1	60.7	64.5
	2023	689	64.7	23.0	24.6	52.3	0.0	0.1	65.8	63.8
Sweden	2019	568	36.0	42.0	41.9	14.4	0.8	0.8	38.3	33.7
	2023	720	39.6	38.4	43.0	17.8	0.7	0.1	40.9	38.5
United Arab Emirates	2019	3173	25.6	55.6	36.7	7.1	0.5	0.1	26.0	25.3
	2023	4674	26.3	56.5	33.3	9.4	0.4	0.4	27.7	24.8
United States	2019	1224	40.4	28.6	60.7	9.6	0.6	0.4	41.2	39.6
	2023	1147	39.9	26.1	66.4	6.1	0.3	1.1	39.0	40.7
International Avg. (20)	2019	15106	36.8	39.9	45.4	13.7	0.6	0.3	37.6	35.9
	2023	19156	35.2	41.9	44.9	12.6	0.3	0.3	36.4	34.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Applying

B_SM3_10 SE72920: Burn rates for different logs - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	20.2	63.7	31.1	4.5	0.5	0.2	21.7	18.8
	2023	1723	21.5	62.1	31.4	5.6	0.5	0.4	23.3	19.7
Dubai, UAE	2019	808	32.0	48.2	39.1	12.3	0.4	0.0	32.1	31.8
	2023	1155	31.4	51.2	34.2	14.2	0.5	0.0	31.9	31.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SM3_11 SE72294: How parachute slows Skydiver B's fall - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	30.2	62.1	26.8	10.2	0.8	27.3	32.3
	2023	634	25.1	66.1	22.1	11.2	0.5	18.9	31.1
Chinese Taipei	2019	702	29.7	68.3	28.8	2.8	0.0	28.5	30.9
	2023	801	48.8	50.4	48.1	1.5	0.0	41.1	55.6
England	2019	485	43.9	51.8	40.6	6.3	1.4	45.9	41.7
	2023	596	62.3	36.4	60.2	2.4	1.0	61.9	62.8
Finland	2019	683	69.1	29.6	66.1	3.7	0.6	70.4	67.7
	2023	842	71.6	27.2	68.7	3.9	0.2	70.7	72.6
France	2019	563	52.0	45.1	49.0	5.8	0.1	52.8	51.4
	2023	637	52.8	43.9	49.1	7.0	0.0	54.0	51.8
Georgia	2019	474	25.4	66.4	22.7	10.6	0.4	20.9	29.2
	2023	692	30.1	60.3	25.9	13.5	0.3	26.6	32.9
Hong Kong SAR	2019	468	32.8	62.7	30.5	6.6	0.2	28.7	36.5
	2023	635	39.5	57.2	37.3	4.8	0.8	41.5	37.7
Hungary	2019	636	33.3	64.3	32.1	3.6	0.0	32.1	34.4
	2023	774	52.8	44.3	49.6	6.1	0.0	53.5	52.2
Israel	2019	521	52.3	43.2	47.4	9.5	0.0	47.5	57.8
	2023	745	44.8	51.4	41.7	6.5	0.4	41.9	47.4
Italy	2019	514	30.6	65.3	28.7	5.8	0.2	24.1	36.8
	2023	655	39.6	55.7	36.5	6.7	1.1	39.1	40.0
Korea, Rep. of	2019	555	52.1	46.2	50.2	3.6	0.0	45.9	57.3
	2023	606	51.1	46.9	49.0	4.1	0.0	41.9	59.3
Lithuania	2019	551	63.2	35.4	61.0	3.6	0.0	63.6	62.8
	2023	775	52.2	44.1	48.3	7.6	0.0	50.1	54.2
Malaysia	2019	1006	30.0	68.6	29.4	1.6	0.5	24.8	35.1
	2023	1254	20.3	78.7	20.0	1.2	0.1	19.2	21.6
Norway (9)	2019	655	66.7	30.8	61.8	6.5	0.9	68.1	65.5
	2023	901	56.9	40.4	53.3	5.4	0.9	59.7	54.4
Portugal	2019	488	48.8	48.4	46.2	5.4	0.0	46.9	50.9
	2023	770	45.1	51.6	42.4	5.9	0.0	41.9	48.1
Qatar	2019	558	29.4	65.8	27.4	6.7	0.1	24.9	35.1
	2023	611	36.5	60.4	34.7	4.7	0.2	32.9	39.8
Singapore	2019	683	71.2	28.4	70.4	1.1	0.1	67.3	74.4
	2023	689	68.4	31.5	68.1	0.3	0.1	62.8	73.3
Sweden	2019	568	68.1	29.7	63.6	5.9	0.8	72.3	64.0
	2023	720	62.3	35.5	58.5	5.9	0.1	65.6	59.3
United Arab Emirates	2019	3173	36.0	61.2	34.4	4.3	0.2	35.6	36.4
	2023	4675	33.1	64.6	32.0	3.0	0.4	31.2	35.1
United States	2019	1224	57.5	41.4	56.0	2.2	0.4	57.4	57.6
	2023	1147	58.6	40.6	57.6	0.5	1.3	58.7	58.6
International Avg. (20)	2019	15106	46.1	50.7	43.7	5.3	0.3	44.2	47.9
	2023	19159	47.6	49.4	45.2	5.1	0.4	45.7	49.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SM3_11 SE72294: How parachute slows Skydiver B's fall - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	30.0	65.8	28.1	5.9	0.2	30.5	29.5
	2023	1723	26.3	70.0	25.0	4.7	0.4	25.0	27.6
Dubai, UAE	2019	808	53.6	45.3	52.3	2.4	0.0	54.7	52.6
	2023	1155	50.6	48.3	49.4	2.2	0.0	46.2	54.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Reasoning

B_SM3_12 SE72231: Experimental set up to test how quickly bars conduct heat - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	33.4	20.7	21.3	31.6	21.0	4.6	0.8	31.2	35.2
	2023	634	39.2	18.4	26.4	36.9	12.3	5.5	0.5	35.2	43.3
Chinese Taipei	2019	702	31.2	10.2	17.9	31.1	40.5	0.3	0.0	35.0	27.5
	2023	801	32.1	8.6	18.1	32.1	41.2	0.0	0.0	34.5	30.0
England	2019	485	54.1	9.0	19.8	51.1	14.5	3.6	1.9	54.2	54.1
	2023	596	58.8	6.4	20.5	57.0	13.0	2.1	1.0	55.2	63.1
Finland	2019	683	57.1	7.3	15.5	54.6	18.3	3.6	0.8	56.0	58.2
	2023	842	55.0	7.4	20.4	53.6	16.1	2.3	0.2	58.0	51.8
France	2019	563	41.3	13.7	22.2	39.4	20.0	4.1	0.5	43.9	39.0
	2023	637	45.9	13.5	22.9	44.4	16.0	3.2	0.0	45.2	46.6
Georgia	2019	473	32.2	26.2	23.7	28.8	10.7	9.8	0.7	33.9	30.7
	2023	692	40.2	17.9	25.9	38.1	13.0	4.7	0.5	43.0	37.7
Hong Kong SAR	2019	468	47.2	11.5	24.1	46.4	16.2	1.6	0.2	48.9	45.5
	2023	635	53.1	9.3	22.3	52.3	14.6	0.8	0.8	52.1	54.0
Hungary	2019	636	50.9	10.2	22.0	50.6	16.5	0.7	0.0	54.8	47.4
	2023	774	53.2	7.4	24.5	53.1	14.8	0.2	0.0	51.0	55.4
Israel	2019	521	48.6	11.6	20.6	47.4	17.9	2.0	0.4	44.5	53.1
	2023	745	48.7	12.4	22.8	47.8	15.2	1.5	0.4	44.4	52.9
Italy	2019	514	38.8	13.0	21.8	37.5	24.3	3.1	0.2	38.3	39.4
	2023	655	35.6	11.2	24.7	34.9	27.3	0.8	1.1	37.3	33.9
Korea, Rep. of	2019	555	57.9	7.3	19.9	57.5	14.6	0.6	0.0	59.0	56.9
	2023	606	63.7	7.6	15.4	63.4	13.1	0.5	0.0	66.0	61.6
Lithuania	2019	551	49.1	7.5	23.7	48.2	18.7	1.8	0.0	51.8	45.6
	2023	775	51.9	8.3	21.0	51.5	18.5	0.8	0.0	51.2	52.5
Malaysia	2019	1006	26.4	17.0	29.0	26.0	26.4	1.0	0.6	27.1	25.7
	2023	1254	27.5	21.1	30.3	27.5	20.9	0.1	0.1	26.7	28.4
Norway (9)	2019	655	37.9	15.4	20.9	34.6	20.3	7.5	1.2	35.1	40.3
	2023	901	48.2	10.3	20.6	46.4	18.9	2.8	1.0	44.6	51.4
Portugal	2019	488	36.9	14.0	19.2	36.6	29.2	1.0	0.0	34.2	39.8
	2023	770	39.5	12.8	25.1	39.2	22.0	0.9	0.0	34.0	44.9
Qatar	2019	558	33.1	25.0	23.0	31.7	16.2	3.7	0.3	32.2	34.1
	2023	611	39.1	14.8	27.7	38.7	17.8	0.8	0.2	39.9	38.4
Singapore	2019	683	64.5	7.3	9.0	64.0	19.0	0.5	0.1	67.7	61.8
	2023	689	68.3	4.0	11.5	68.2	16.2	0.0	0.1	66.3	70.0
Sweden	2019	568	35.9	10.9	18.2	33.9	31.4	4.4	1.3	34.6	37.3
	2023	720	41.5	9.2	21.7	40.0	25.4	3.6	0.1	42.0	41.1
United Arab Emirates	2019	3173	37.1	20.2	24.8	36.3	16.5	1.9	0.3	36.4	37.8
	2023	4675	42.6	16.2	26.8	41.9	13.6	1.0	0.5	40.7	44.3
United States	2019	1224	50.9	12.1	22.5	49.8	13.3	1.3	0.9	51.1	50.8
	2023	1147	52.4	9.7	24.4	51.5	12.6	0.3	1.4	54.3	50.5
International Avg. (20)	2019	15105	43.2	13.5	21.0	41.9	20.3	2.9	0.5	43.5	43.0
	2023	19159	46.8	11.3	22.6	45.9	18.1	1.6	0.4	46.1	47.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Reasoning

B_SM3_12 SE72231: Experimental set up to test how quickly bars conduct heat - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	31.7	23.6	26.5	31.0	16.8	1.8	0.3	30.8	32.5
	2023	1723	39.5	17.8	29.7	38.9	12.1	0.9	0.6	37.3	41.8
Dubai, UAE	2019	808	51.2	10.7	20.8	50.4	16.6	1.6	0.0	52.0	50.4
	2023	1155	56.3	9.3	19.4	55.5	14.4	1.1	0.2	53.7	58.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Knowing
B_SM3_13 SE72261: Conductors or insulators (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	53.8	44.7	52.0	2.5	0.8	48.7	57.8
	2023	634	42.9	53.8	40.5	5.1	0.6	35.9	50.1
Chinese Taipei	2019	702	86.1	13.8	85.7	0.5	0.0	87.7	84.5
	2023	801	82.5	17.5	82.5	0.0	0.0	84.5	80.8
England	2019	485	53.9	44.4	51.8	2.0	1.9	52.6	55.3
	2023	596	51.4	47.2	49.8	2.0	1.0	45.9	57.8
Finland	2019	683	67.9	31.0	65.6	2.4	1.0	70.1	65.8
	2023	842	56.3	43.2	55.7	0.8	0.3	58.1	54.4
France	2019	563	66.5	32.6	64.5	2.4	0.5	61.8	70.8
	2023	637	58.2	41.0	57.1	2.0	0.0	55.2	60.8
Georgia	2019	473	49.5	48.0	47.2	3.7	1.1	52.7	46.8
	2023	692	43.3	53.8	41.1	4.4	0.7	43.2	43.4
Hong Kong SAR	2019	468	74.5	25.4	74.1	0.2	0.2	77.7	71.4
	2023	635	78.9	20.9	78.1	0.1	0.9	77.1	80.6
Hungary	2019	636	63.8	36.2	63.7	0.1	0.0	58.0	69.2
	2023	774	60.9	39.1	60.9	0.0	0.0	58.1	63.7
Israel	2019	521	78.8	20.9	77.8	0.7	0.6	77.9	79.8
	2023	745	70.5	29.0	69.2	1.3	0.5	70.7	70.3
Italy	2019	514	60.9	38.7	60.2	0.9	0.2	56.0	65.6
	2023	655	57.0	42.1	55.9	0.8	1.1	52.9	61.0
Korea, Rep. of	2019	555	69.1	30.8	68.9	0.3	0.0	65.4	72.3
	2023	606	69.1	30.7	68.7	0.6	0.0	67.6	70.5
Lithuania	2019	551	74.3	25.5	73.6	0.9	0.0	75.0	73.4
	2023	775	64.1	35.7	63.8	0.5	0.0	62.8	65.3
Malaysia	2019	1006	54.0	45.7	53.6	0.2	0.6	53.8	54.1
	2023	1254	42.9	57.0	42.9	0.1	0.1	43.3	42.4
Norway (9)	2019	655	63.1	34.9	59.5	4.4	1.2	59.7	66.0
	2023	901	47.5	50.7	45.8	2.3	1.2	47.6	47.4
Portugal	2019	488	60.7	39.3	60.6	0.2	0.0	56.9	64.7
	2023	770	52.3	47.6	52.2	0.2	0.0	44.8	59.6
Qatar	2019	558	62.1	37.1	60.7	1.8	0.3	64.7	59.0
	2023	611	55.1	44.6	54.6	0.6	0.2	53.6	56.3
Singapore	2019	683	71.7	28.2	71.6	0.1	0.1	73.0	70.7
	2023	689	68.5	31.4	68.4	0.0	0.1	64.7	71.8
Sweden	2019	568	60.0	38.5	57.7	2.4	1.4	66.1	53.8
	2023	720	61.1	37.9	59.7	2.3	0.1	60.9	61.3
United Arab Emirates	2019	3170	52.9	46.4	52.2	1.1	0.3	56.0	50.3
	2023	4675	55.2	44.2	54.5	0.7	0.6	54.4	56.0
United States	2019	1224	49.5	49.7	48.7	0.6	1.0	49.2	49.8
	2023	1147	43.3	55.7	42.6	0.1	1.6	38.4	48.4
International Avg. (20)	2019	15102	63.6	35.6	62.5	1.4	0.6	63.1	64.1
	2023	19159	58.1	41.2	57.2	1.2	0.4	56.0	60.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Knowing

B_SM3_13 SE72261: Conductors or insulators (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	42.6	56.6	42.1	1.0	0.3	45.2	40.3
	2023	1723	43.8	55.4	43.2	0.8	0.6	43.1	44.5
Dubai, UAE	2019	808	64.6	34.9	63.9	1.1	0.1	64.7	64.6
	2023	1155	63.9	35.7	63.2	0.8	0.3	62.8	64.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing
B_SM3_15 SE72348: What must be removed from ocean water before drinking - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	61.0	35.9	56.1	7.1	0.9	52.7	66.9
	2023	634	68.4	29.4	63.7	6.3	0.6	66.1	70.8
Chinese Taipei	2019	702	84.3	15.5	82.8	1.7	0.0	84.7	83.9
	2023	801	84.2	15.6	83.4	1.0	0.0	82.0	86.1
England	2019	485	78.0	20.5	72.5	5.0	2.0	76.8	79.3
	2023	596	77.9	21.2	74.4	3.4	1.1	80.4	74.9
Finland	2019	683	90.0	9.8	88.0	1.2	1.0	91.5	88.6
	2023	842	84.0	15.6	82.0	2.2	0.3	81.9	86.2
France	2019	563	91.8	7.9	88.2	3.1	0.8	92.5	91.2
	2023	637	90.5	9.3	88.0	2.8	0.0	90.8	90.2
Georgia	2019	474	82.8	15.8	76.0	7.1	1.1	86.4	79.7
	2023	692	79.7	18.5	72.5	8.3	0.8	75.9	82.8
Hong Kong SAR	2019	468	59.9	37.9	56.7	5.0	0.4	60.4	59.5
	2023	635	66.2	31.8	62.4	5.0	0.9	65.8	66.6
Hungary	2019	636	87.9	11.8	85.6	2.6	0.0	84.0	91.4
	2023	774	89.8	10.0	87.6	2.5	0.0	88.9	90.7
Israel	2019	521	74.6	23.2	68.2	7.9	0.6	73.0	76.4
	2023	745	68.9	29.2	64.6	5.6	0.7	68.9	68.9
Italy	2019	514	86.5	12.9	83.0	3.7	0.4	86.6	86.4
	2023	655	87.4	11.9	82.6	4.4	1.1	84.8	89.9
Korea, Rep. of	2019	555	85.6	14.1	83.8	2.2	0.0	83.8	87.3
	2023	606	82.3	17.3	80.3	2.4	0.0	82.1	82.4
Lithuania	2019	551	87.4	12.2	84.7	2.8	0.2	85.3	90.0
	2023	775	91.3	8.4	88.7	2.7	0.1	90.3	92.3
Malaysia	2019	1006	45.6	52.8	44.2	2.4	0.6	44.6	46.5
	2023	1254	39.4	59.7	38.8	1.5	0.1	38.6	40.3
Norway (9)	2019	655	80.7	17.9	74.9	5.7	1.5	79.0	82.2
	2023	901	75.8	23.1	72.6	3.0	1.3	74.6	76.9
Portugal	2019	488	83.5	16.1	81.4	2.6	0.0	82.8	84.2
	2023	770	76.9	22.0	73.4	4.6	0.0	77.3	76.6
Qatar	2019	558	68.6	29.5	64.5	5.6	0.3	72.0	64.5
	2023	610	83.5	16.0	80.9	2.9	0.3	89.7	77.9
Singapore	2019	683	73.1	26.5	72.3	1.0	0.1	72.7	73.5
	2023	689	74.0	26.0	73.9	0.0	0.1	72.4	75.4
Sweden	2019	568	72.1	25.7	66.3	6.6	1.4	73.4	70.7
	2023	720	73.3	25.3	69.4	5.1	0.1	73.2	73.4
United Arab Emirates	2019	3172	60.1	38.0	57.3	4.4	0.3	60.9	59.4
	2023	4674	72.4	26.5	69.5	3.1	0.9	74.6	70.1
United States	2019	1224	75.3	24.0	73.2	1.6	1.1	69.6	81.2
	2023	1147	78.5	21.0	76.8	0.6	1.6	76.7	80.4
International Avg. (20)	2019	15105	76.4	22.4	73.0	4.0	0.6	75.6	77.1
	2023	19157	77.2	21.9	74.3	3.4	0.5	76.8	77.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Knowing

B_SM3_15 SE72348: What must be removed from ocean water before drinking - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	52.5	44.6	49.4	5.6	0.4	54.5	50.6
	2023	1722	63.3	34.6	59.5	4.6	1.3	66.8	59.7
Dubai, UAE	2019	808	67.7	31.5	65.9	2.5	0.1	65.0	70.2
	2023	1155	82.3	17.2	80.2	2.2	0.3	82.0	82.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Reasoning

B_SM3_16 SE72720: Why temperature is hotter in the city center - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	599	29.5	28.9	12.1	41.0	15.9	0.8	1.3	22.2	35.2
	2023	634	29.8	29.1	11.0	41.2	16.5	1.4	0.8	28.0	31.6
Chinese Taipei	2019	702	43.4	43.1	6.8	12.1	37.5	0.6	0.0	49.5	37.4
	2023	801	40.5	40.5	8.7	7.1	43.7	0.0	0.0	43.4	38.0
England	2019	485	54.2	51.9	9.4	22.5	12.0	1.7	2.5	54.4	53.9
	2023	596	53.7	52.4	10.9	18.2	16.1	0.9	1.5	56.5	50.4
Finland	2019	683	36.8	36.1	7.4	37.7	16.9	0.8	1.2	36.2	37.4
	2023	842	42.0	41.8	8.0	34.2	15.5	0.1	0.4	42.9	41.1
France	2019	563	36.6	36.0	10.7	35.8	16.0	0.8	0.8	35.5	37.6
	2023	637	33.2	32.8	13.3	35.1	17.6	1.2	0.1	35.1	31.6
Hong Kong SAR	2019	468	33.9	33.4	12.2	27.9	25.1	0.8	0.5	37.6	30.4
	2023	635	39.5	38.9	13.8	21.5	24.4	0.5	0.9	41.5	37.6
Hungary	2019	636	36.1	36.0	7.1	41.4	15.2	0.3	0.0	33.5	38.5
	2023	774	35.0	35.0	8.7	39.7	16.6	0.0	0.0	34.2	35.7
Israel	2019	521	34.0	33.6	14.3	32.8	18.0	0.4	0.9	34.0	34.0
	2023	745	32.9	32.4	14.9	33.3	18.0	0.4	1.0	34.0	31.8
Korea, Rep. of	2019	555	43.9	43.8	7.3	24.9	23.8	0.2	0.0	47.5	40.7
	2023	606	41.1	40.9	6.2	22.6	29.8	0.4	0.0	47.4	35.4
Lithuania	2019	551	41.7	41.4	3.0	28.9	25.9	0.4	0.2	42.8	40.4
	2023	775	41.0	40.9	7.8	25.3	25.7	0.2	0.1	41.3	40.7
Malaysia	2019	1006	47.4	46.8	14.0	16.5	21.4	0.3	0.9	49.4	45.5
	2023	1254	38.6	38.5	17.0	20.9	23.3	0.2	0.1	41.2	35.6
Norway (9)	2019	655	33.6	32.6	9.0	40.1	15.1	1.3	1.9	28.7	37.9
	2023	901	31.9	31.2	10.2	36.9	19.5	0.7	1.5	29.0	34.5
Portugal	2019	488	28.8	28.5	10.2	40.0	20.2	1.0	0.0	29.6	28.0
	2023	770	37.6	37.4	8.4	32.7	21.1	0.2	0.1	38.0	37.1
Qatar	2019	558	39.0	37.9	12.4	25.5	21.3	2.3	0.6	42.9	34.5
	2023	611	35.8	35.3	12.1	28.6	22.7	1.0	0.3	33.1	38.2
Singapore	2019	683	53.3	53.0	4.1	20.2	22.1	0.4	0.1	51.2	55.0
	2023	689	61.7	61.5	7.0	14.0	17.3	0.1	0.1	62.3	61.2
United Arab Emirates	2019	3170	35.9	35.3	17.0	26.6	19.6	0.9	0.5	34.7	36.9
	2023	4674	41.2	40.4	16.7	23.2	17.9	0.7	1.2	41.9	40.5
United States	2019	1224	50.1	49.3	8.7	24.8	15.7	0.4	1.1	48.7	51.4
	2023	1147	53.3	52.4	10.2	22.3	13.3	0.2	1.6	55.0	51.6
International Avg. (17)	2019	13547	39.9	39.3	9.7	29.3	20.1	0.8	0.7	39.9	39.7
	2023	17091	40.5	40.1	10.9	26.9	21.1	0.5	0.6	41.5	39.6
Abu Dhabi, UAE	2019	1173	31.4	30.9	20.9	27.2	19.3	1.1	0.6	32.1	30.8
	2023	1723	33.9	32.9	21.8	24.9	17.7	0.8	1.9	36.6	31.1
Dubai, UAE	2019	808	46.9	46.5	8.9	26.5	17.3	0.5	0.3	44.8	48.9
	2023	1155	52.0	51.4	8.5	22.7	16.2	0.6	0.5	52.7	51.4

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Reasoning

B_SM4_01 SE72011: Compare fish and human fields of vision - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	70.7	70.2	2.4	3.9	22.9	0.6	0.1	64.1	76.1
	2023	635	68.5	68.5	3.6	4.9	23.0	0.0	0.0	62.4	73.6
Chinese Taipei	2019	685	82.2	82.2	1.4	3.0	13.4	0.0	0.0	81.8	82.7
	2023	797	87.1	87.1	0.8	2.6	9.5	0.0	0.0	87.8	86.4
England	2019	482	74.4	73.6	1.7	5.4	18.2	0.9	0.1	72.2	76.5
	2023	620	75.0	74.7	1.8	4.3	18.8	0.2	0.1	70.9	79.2
Finland	2019	701	79.6	79.2	1.1	5.8	13.4	0.3	0.1	81.9	77.5
	2023	836	79.3	79.1	1.7	4.6	14.3	0.3	0.0	79.2	79.4
France	2019	546	79.7	79.7	1.4	1.8	17.1	0.0	0.0	79.1	80.4
	2023	634	76.1	76.0	2.3	2.2	19.3	0.2	0.0	76.8	75.3
Georgia	2019	467	58.1	57.6	4.2	5.7	31.6	0.9	0.0	59.4	57.0
	2023	705	54.9	54.8	4.0	6.5	34.5	0.2	0.0	50.3	60.2
Hong Kong SAR	2019	462	72.7	72.7	4.3	7.2	15.8	0.0	0.0	68.7	76.1
	2023	638	76.8	76.6	2.4	6.7	14.0	0.3	0.0	71.5	82.5
Hungary	2019	651	76.1	75.9	1.4	3.3	19.2	0.2	0.0	73.4	78.9
	2023	772	69.3	69.3	1.8	4.7	24.2	0.0	0.0	66.0	72.7
Israel	2019	539	72.8	72.3	3.0	2.8	21.3	0.6	0.0	67.1	78.9
	2023	735	68.7	68.2	5.1	6.4	19.5	0.4	0.3	66.9	70.5
Italy	2019	522	70.8	70.7	2.9	7.6	18.6	0.2	0.0	69.0	72.8
	2023	650	67.3	66.8	2.6	7.2	22.7	0.7	0.0	66.2	68.4
Korea, Rep. of	2019	550	85.7	85.5	1.2	4.2	8.8	0.2	0.0	83.6	87.7
	2023	617	91.8	91.8	0.6	1.2	6.3	0.0	0.0	89.7	94.0
Lithuania	2019	549	81.1	81.1	1.8	2.5	14.6	0.1	0.0	77.7	84.7
	2023	776	79.2	79.2	2.8	3.0	15.0	0.0	0.0	80.0	78.4
Malaysia	2019	1009	52.6	52.5	3.3	11.0	33.1	0.1	0.0	43.3	62.5
	2023	1273	49.0	49.0	6.2	14.6	30.1	0.0	0.1	47.6	50.6
Norway (9)	2019	664	79.0	78.3	2.6	3.9	14.2	0.2	0.8	74.7	83.8
	2023	896	76.1	75.8	2.9	5.1	15.8	0.0	0.4	73.3	78.5
Portugal	2019	485	66.8	66.8	1.6	2.9	28.7	0.0	0.0	61.8	71.9
	2023	759	60.9	60.9	2.9	5.4	30.8	0.0	0.0	56.4	65.2
Qatar	2019	561	53.7	53.4	4.9	7.2	33.9	0.5	0.0	51.3	55.8
	2023	619	55.8	55.7	4.7	7.6	31.8	0.2	0.0	55.2	56.4
Singapore	2019	692	86.8	86.5	0.8	2.1	10.3	0.4	0.0	86.8	86.8
	2023	692	85.3	85.3	1.6	1.6	11.5	0.0	0.0	84.5	86.0
Sweden	2019	588	75.5	74.4	2.5	3.9	17.8	1.4	0.0	74.4	76.6
	2023	723	71.4	71.1	2.3	8.3	18.0	0.3	0.1	70.9	71.8
United Arab Emirates	2019	3201	54.8	54.3	6.6	10.6	27.6	0.9	0.1	51.9	57.5
	2023	4672	62.3	61.9	6.1	8.0	23.4	0.2	0.3	61.5	63.1
United States	2019	1258	84.3	83.8	2.5	3.8	9.3	0.4	0.1	82.5	86.1
	2023	1118	81.6	80.7	3.4	4.3	10.5	0.3	0.8	79.0	84.1
International Avg. (20)	2019	15190	72.9	72.5	2.6	4.9	19.5	0.4	0.1	70.2	75.5
	2023	19167	71.8	71.6	3.0	5.5	19.7	0.2	0.1	69.8	73.8

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Reasoning

B_SM4_01 SE72011: Compare fish and human fields of vision - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1164	48.7	48.4	11.2	13.0	26.7	0.8	0.0	46.2	51.1
	2023	1744	55.7	55.5	10.6	9.5	24.0	0.2	0.3	55.4	56.0
Dubai, UAE	2019	820	71.7	71.0	2.7	6.2	19.2	0.9	0.0	68.0	75.2
	2023	1161	74.9	74.4	2.8	4.7	17.4	0.3	0.4	71.9	77.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing
B_SM4_02 SE72905: Risk factors for disease (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	56.3	43.3	55.9	0.7	0.1	62.7	51.0
	2023	635	72.6	27.0	71.4	1.6	0.0	79.5	66.9
Chinese Taipei	2019	685	63.3	36.5	63.1	0.4	0.0	66.2	60.5
	2023	797	60.5	39.5	60.5	0.0	0.0	59.2	61.8
England	2019	482	70.1	29.6	69.4	0.9	0.1	69.7	70.4
	2023	620	71.4	28.5	71.0	0.4	0.1	70.4	72.3
Finland	2019	701	73.0	26.7	72.4	0.7	0.1	79.3	67.6
	2023	836	67.5	32.2	66.9	0.6	0.3	67.3	67.7
France	2019	546	47.7	51.9	47.4	0.7	0.0	51.4	43.7
	2023	634	49.2	50.5	48.9	0.6	0.0	52.9	45.2
Georgia	2019	467	31.4	66.5	30.4	3.1	0.0	37.7	25.9
	2023	705	30.4	68.7	30.0	1.3	0.0	29.6	31.3
Hong Kong SAR	2019	462	40.6	58.8	40.2	0.9	0.0	41.1	40.2
	2023	637	51.0	48.9	51.0	0.1	0.0	49.4	52.8
Hungary	2019	651	36.3	63.6	36.2	0.2	0.0	38.4	34.0
	2023	772	31.5	68.5	31.5	0.0	0.0	36.9	26.1
Israel	2019	539	56.4	43.4	56.1	0.4	0.0	60.3	52.2
	2023	735	58.4	41.3	58.0	0.4	0.3	63.5	53.3
Italy	2019	522	71.8	27.9	71.0	1.1	0.0	75.8	67.5
	2023	650	70.5	29.4	70.5	0.1	0.0	75.0	65.9
Korea, Rep. of	2019	550	71.5	28.5	71.4	0.1	0.0	70.7	72.2
	2023	617	71.4	28.5	71.2	0.3	0.0	75.3	67.2
Lithuania	2019	549	37.6	62.1	37.4	0.5	0.0	41.5	33.5
	2023	776	35.8	64.1	35.7	0.1	0.0	39.2	32.5
Malaysia	2019	1009	55.9	44.1	55.9	0.0	0.0	59.2	52.3
	2023	1273	50.0	49.9	49.9	0.1	0.1	53.9	45.7
Norway (9)	2019	664	50.6	48.4	49.7	1.0	0.8	54.0	47.1
	2023	896	47.9	51.5	47.4	0.7	0.4	48.3	47.6
Portugal	2019	485	71.8	28.2	71.6	0.2	0.0	77.7	65.8
	2023	759	71.2	28.8	71.2	0.0	0.0	76.9	65.8
Qatar	2019	561	54.0	45.6	53.5	0.9	0.0	59.0	49.2
	2023	619	56.7	43.0	56.4	0.6	0.0	63.4	50.5
Singapore	2019	692	77.4	22.5	77.3	0.2	0.0	81.6	73.5
	2023	692	72.3	27.7	72.3	0.0	0.0	71.7	72.9
Sweden	2019	588	44.8	54.9	44.5	0.7	0.0	44.4	45.2
	2023	723	49.0	50.8	48.8	0.2	0.1	48.6	49.3
United Arab Emirates	2019	3200	54.5	44.9	53.9	1.1	0.1	59.8	49.8
	2023	4672	57.8	41.9	57.4	0.4	0.3	61.8	53.9
United States	2019	1258	72.7	27.2	72.5	0.2	0.1	74.9	70.5
	2023	1118	69.4	30.2	68.5	0.4	0.9	72.3	66.5
International Avg. (20)	2019	15189	56.9	42.7	56.5	0.7	0.1	60.3	53.6
	2023	19166	57.2	42.5	56.9	0.4	0.1	59.8	54.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing

B_SM4_02 SE72905: Risk factors for disease (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1164	39.7	59.5	39.2	1.3	0.0	43.1	36.6
	2023	1744	43.8	55.8	43.5	0.4	0.3	48.5	39.1
Dubai, UAE	2019	820	71.2	28.6	70.9	0.5	0.0	73.1	69.5
	2023	1161	71.5	28.3	70.9	0.5	0.4	73.0	70.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SM4_03 SE72049: Source of DNA making flowers pink - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	60.1	19.1	58.2	8.9	10.7	3.0	0.1	61.1	59.2
	2023	635	59.8	16.4	59.3	14.2	9.3	0.8	0.0	60.6	59.1
Chinese Taipei	2019	685	63.4	20.9	63.1	4.3	11.2	0.5	0.0	69.0	57.8
	2023	797	65.7	21.7	65.7	4.4	8.2	0.0	0.0	68.5	62.9
England	2019	482	57.2	24.2	56.3	6.1	11.8	1.6	0.1	55.2	59.2
	2023	620	61.3	24.0	61.1	5.6	8.9	0.3	0.1	61.4	61.3
Finland	2019	701	57.1	21.1	56.7	9.0	12.5	0.5	0.3	60.8	53.9
	2023	836	55.3	20.7	54.8	15.6	7.9	0.6	0.3	58.7	52.1
France	2019	546	64.5	14.4	64.0	6.6	14.1	0.5	0.3	65.5	63.4
	2023	634	63.6	15.6	63.4	9.5	11.2	0.3	0.0	69.1	57.8
Georgia	2019	467	50.3	15.2	49.8	10.3	23.7	1.0	0.0	52.5	48.3
	2023	705	49.8	16.5	48.5	11.8	20.6	2.7	0.0	53.5	45.6
Hong Kong SAR	2019	462	52.5	26.6	52.3	10.2	10.5	0.4	0.0	53.6	51.6
	2023	638	57.7	21.0	57.5	10.9	10.2	0.3	0.0	56.6	58.9
Hungary	2019	651	66.3	10.8	66.0	4.2	18.6	0.5	0.0	66.0	66.6
	2023	772	64.8	11.6	64.8	8.8	14.7	0.1	0.0	64.5	65.2
Israel	2019	539	56.4	16.0	55.9	9.2	17.8	1.0	0.0	57.9	54.9
	2023	735	58.4	14.7	57.5	10.4	16.0	1.2	0.3	60.3	56.4
Italy	2019	522	72.7	15.4	72.0	4.7	6.9	0.9	0.0	73.6	71.8
	2023	650	68.4	13.0	68.2	7.4	11.2	0.2	0.0	73.7	63.0
Korea, Rep. of	2019	550	59.2	24.1	59.0	7.6	9.0	0.3	0.0	58.6	59.8
	2023	617	56.0	26.1	55.9	7.9	9.8	0.2	0.0	56.6	55.4
Lithuania	2019	549	61.4	22.9	61.0	7.3	8.0	0.7	0.0	66.8	55.7
	2023	776	59.7	23.9	59.5	7.4	8.9	0.2	0.0	66.6	53.0
Malaysia	2019	1009	65.8	15.6	65.8	6.1	12.5	0.0	0.0	65.8	65.8
	2023	1273	59.4	17.1	59.3	8.8	14.7	0.0	0.1	61.2	57.3
Norway (9)	2019	664	60.2	21.5	58.7	6.4	10.9	1.7	0.8	59.7	60.7
	2023	896	54.8	24.9	53.9	10.0	9.6	1.2	0.5	56.1	53.7
Portugal	2019	485	65.9	14.0	65.8	9.1	11.0	0.1	0.0	70.8	60.9
	2023	759	58.7	17.1	58.7	12.9	11.4	0.0	0.0	62.0	55.5
Qatar	2019	561	51.2	21.6	50.6	8.3	18.2	1.2	0.0	51.2	51.2
	2023	619	52.2	20.7	51.8	6.9	19.8	0.4	0.4	57.3	47.5
Singapore	2019	692	76.2	16.2	75.9	2.8	4.7	0.4	0.0	75.7	76.8
	2023	692	70.0	22.6	70.0	3.3	4.0	0.0	0.0	72.5	67.6
Sweden	2019	588	55.8	21.5	55.0	9.4	12.8	1.4	0.0	54.1	57.6
	2023	723	50.8	25.7	50.3	9.3	13.8	0.8	0.1	49.9	51.6
United Arab Emirates	2019	3200	54.2	20.2	53.6	8.9	16.2	1.0	0.1	55.5	53.0
	2023	4672	55.1	21.9	54.6	7.8	14.8	0.4	0.5	56.8	53.4
United States	2019	1258	59.2	25.9	58.9	5.7	9.1	0.3	0.1	61.0	57.4
	2023	1118	54.7	28.4	53.8	7.3	8.9	0.4	1.2	57.5	52.0
International Avg. (20)	2019	15189	60.5	19.4	59.9	7.3	12.5	0.8	0.1	61.7	59.3
	2023	19167	58.8	20.2	58.4	9.0	11.7	0.5	0.2	61.2	56.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SM4_03 SE72049: Source of DNA making flowers pink - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1164	47.1	24.6	46.7	11.6	16.2	0.9	0.0	49.7	44.8
	2023	1744	51.9	23.7	51.5	10.8	13.2	0.4	0.4	54.1	49.6
Dubai, UAE	2019	820	65.6	17.0	65.2	5.2	12.0	0.6	0.0	68.2	63.1
	2023	1161	62.8	22.5	62.3	4.8	9.5	0.3	0.6	62.1	63.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SM4_04 SE72016: Gases in inhaled and exhaled air (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	32.2	48.0	19.6	17.6	14.6	0.1	32.1	32.2
	2023	635	11.8	61.3	12.5	2.8	23.4	0.0	9.6	13.6
Chinese Taipei	2019	685	62.6	26.6	16.7	50.2	6.5	0.0	59.9	65.3
	2023	797	55.1	30.3	24.8	40.0	4.8	0.0	54.1	56.1
England	2019	482	20.4	55.9	23.4	5.6	14.9	0.1	17.7	23.1
	2023	620	48.4	38.3	19.5	35.3	6.8	0.1	46.8	50.0
Finland	2019	701	35.7	45.2	24.1	19.7	10.7	0.3	37.5	34.1
	2023	836	37.5	46.7	21.7	23.7	7.6	0.3	31.2	43.5
France	2019	546	39.7	43.0	17.6	25.2	13.9	0.3	35.7	44.1
	2023	634	32.6	48.9	21.7	18.0	11.5	0.0	30.4	34.8
Georgia	2019	467	19.6	47.9	18.6	4.6	28.9	0.0	18.3	20.7
	2023	705	35.5	37.7	18.0	16.7	27.5	0.1	33.0	38.4
Hong Kong SAR	2019	462	36.5	35.3	43.1	11.1	10.6	0.0	35.3	37.4
	2023	638	50.8	31.2	26.5	32.6	9.6	0.0	47.4	54.3
Hungary	2019	651	55.5	30.8	21.0	41.1	7.1	0.0	51.8	59.5
	2023	772	40.6	43.8	23.3	26.3	6.6	0.0	36.8	44.3
Israel	2019	539	33.4	47.8	20.8	18.8	12.4	0.2	30.5	36.4
	2023	734	36.3	47.6	14.4	24.0	13.7	0.3	36.3	36.3
Italy	2019	522	24.7	50.1	27.4	7.2	15.2	0.1	21.3	28.2
	2023	650	33.7	44.0	17.8	17.9	20.3	0.0	29.4	38.2
Korea, Rep. of	2019	550	47.9	38.2	18.7	34.4	8.7	0.0	41.7	53.5
	2023	617	37.7	47.4	14.8	25.8	12.0	0.0	34.8	41.0
Lithuania	2019	549	40.1	34.0	44.1	15.4	6.5	0.0	35.8	44.8
	2023	776	32.8	43.4	31.5	13.1	12.0	0.0	32.6	33.0
Malaysia	2019	1009	28.1	59.1	21.9	16.4	2.6	0.0	28.6	27.5
	2023	1274	11.7	80.6	10.8	6.0	2.6	0.1	11.1	12.2
Norway (9)	2019	664	32.4	42.8	21.4	15.0	19.9	1.0	31.8	33.3
	2023	896	34.9	47.9	14.1	22.5	15.1	0.5	32.1	37.3
Portugal	2019	485	30.8	48.4	20.1	15.9	15.5	0.0	28.0	33.6
	2023	759	33.1	47.8	15.4	19.8	17.0	0.0	31.4	34.6
Qatar	2019	561	32.1	52.6	16.9	20.4	10.0	0.0	32.3	32.0
	2023	618	34.7	50.4	22.8	21.4	4.8	0.6	35.5	33.9
Singapore	2019	692	72.7	16.9	20.1	61.6	1.3	0.0	70.6	74.5
	2023	692	66.5	22.0	22.1	54.6	1.3	0.0	65.1	67.8
Sweden	2019	588	62.7	21.4	18.7	42.4	17.4	0.1	61.5	64.2
	2023	723	48.2	33.7	20.6	30.7	14.7	0.2	48.2	48.3
United Arab Emirates	2019	3205	35.8	49.6	18.4	23.6	8.4	0.1	35.4	36.2
	2023	4670	28.8	57.0	19.8	17.2	5.4	0.6	27.9	29.7
United States	2019	1258	37.9	45.9	28.8	22.5	2.7	0.1	37.6	38.3
	2023	1118	35.0	51.4	21.2	22.8	3.3	1.3	33.8	36.3
International Avg. (20)	2019	15194	39.0	42.0	23.1	23.4	11.4	0.1	37.2	40.9
	2023	19164	37.3	45.6	19.7	23.6	11.0	0.2	35.4	39.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SM4_04 SE72016: Gases in inhaled and exhaled air (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1168	26.2	58.2	14.3	16.0	11.5	0.0	27.4	24.8
	2023	1743	21.4	65.9	15.2	12.4	6.0	0.5	21.0	21.7
Dubai, UAE	2019	820	51.5	35.8	21.8	38.6	3.9	0.0	49.1	53.7
	2023	1161	42.0	42.5	25.2	27.2	4.4	0.6	39.1	44.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Reasoning
B_SM4_05 SE72451: Oldest fossils - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	44.4	54.0	43.1	2.5	0.3	42.3	46.0
	2023	635	38.3	60.4	37.5	1.8	0.3	39.6	37.3
Chinese Taipei	2019	685	77.7	22.3	77.7	0.0	0.0	81.4	74.1
	2023	797	83.3	16.7	83.1	0.2	0.0	82.3	84.2
England	2019	482	59.8	39.5	58.8	1.4	0.3	61.1	58.6
	2023	620	73.8	26.0	73.4	0.4	0.1	74.2	73.4
Finland	2019	701	58.5	41.2	58.1	0.4	0.3	64.5	53.1
	2023	836	54.4	45.3	54.0	0.4	0.3	58.4	50.6
France	2019	546	54.4	45.1	53.8	0.7	0.3	56.8	51.8
	2023	634	54.2	45.7	54.1	0.2	0.1	57.8	50.4
Georgia	2019	467	34.9	64.3	34.4	1.1	0.1	33.2	36.3
	2023	705	44.8	54.3	44.0	0.2	1.5	50.3	38.3
Hong Kong SAR	2019	462	66.2	33.7	65.9	0.3	0.0	64.3	67.7
	2023	638	66.3	33.7	66.2	0.1	0.0	70.0	62.3
Hungary	2019	651	59.2	40.7	59.0	0.3	0.0	58.3	60.1
	2023	772	54.9	45.0	54.8	0.2	0.0	57.6	52.1
Israel	2019	539	59.6	40.1	59.0	0.7	0.2	58.1	61.2
	2023	734	59.1	40.6	58.5	0.5	0.3	58.8	59.3
Italy	2019	522	48.8	50.6	48.3	0.9	0.1	46.9	50.9
	2023	650	50.1	49.5	49.8	0.8	0.0	52.9	47.3
Korea, Rep. of	2019	550	88.2	11.8	87.8	0.4	0.0	88.1	88.2
	2023	617	82.2	17.8	82.0	0.2	0.0	85.7	78.4
Lithuania	2019	549	67.4	32.5	67.2	0.3	0.0	68.7	66.0
	2023	776	62.1	37.8	61.9	0.4	0.0	69.8	54.7
Malaysia	2019	1009	60.6	39.3	60.4	0.3	0.0	60.2	61.0
	2023	1274	49.1	50.8	48.9	0.1	0.3	49.7	48.4
Norway (9)	2019	664	58.0	41.1	56.6	1.2	1.1	59.0	57.0
	2023	896	57.5	42.1	56.9	0.5	0.5	60.0	55.3
Portugal	2019	485	64.9	35.1	64.9	0.0	0.0	65.8	64.0
	2023	759	61.3	38.6	61.1	0.1	0.2	60.4	62.2
Qatar	2019	561	44.8	54.9	44.6	0.5	0.0	46.7	43.1
	2023	619	44.2	55.0	43.6	0.6	0.8	47.0	41.7
Singapore	2019	692	77.7	22.1	77.2	0.7	0.0	76.5	78.9
	2023	692	77.2	22.8	77.2	0.0	0.0	78.6	75.9
Sweden	2019	588	67.6	31.9	66.4	1.5	0.2	67.2	68.0
	2023	723	67.0	32.7	66.2	1.0	0.2	70.5	63.5
United Arab Emirates	2019	3205	56.4	43.3	56.1	0.5	0.1	61.1	52.2
	2023	4672	50.2	49.1	49.5	0.6	0.8	53.3	47.1
United States	2019	1258	80.2	19.7	79.7	0.3	0.3	82.4	78.1
	2023	1118	72.1	27.5	70.8	0.4	1.4	72.6	71.5
International Avg. (20)	2019	15194	61.5	38.2	61.0	0.7	0.2	62.1	60.8
	2023	19167	60.1	39.6	59.7	0.4	0.3	62.5	57.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Reasoning
B_SM4_05 SE72451: Oldest fossils - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1168	47.1	52.5	46.8	0.6	0.1	53.9	40.7
	2023	1744	43.9	55.2	43.2	0.7	0.8	47.7	40.1
Dubai, UAE	2019	820	74.1	25.9	74.0	0.1	0.0	75.2	73.1
	2023	1161	62.3	37.1	61.3	0.7	0.9	63.9	60.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SM4_06 SE72074: How planting trees benefits environment - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	19.7	74.7	18.3	6.7	0.3	18.0	21.0
	2023	635	29.5	63.6	26.6	9.5	0.3	24.4	33.6
Chinese Taipei	2019	685	38.1	60.7	37.4	1.9	0.0	36.9	39.4
	2023	797	34.5	64.8	34.2	1.0	0.0	34.5	34.6
England	2019	482	50.9	45.3	46.9	7.5	0.3	50.5	51.3
	2023	620	63.4	35.5	61.6	2.8	0.1	67.1	59.7
Finland	2019	701	36.8	60.4	35.2	4.2	0.3	40.6	33.4
	2023	836	39.0	58.7	37.6	3.4	0.3	40.5	37.6
France	2019	546	30.7	64.0	28.4	7.3	0.3	31.3	30.1
	2023	634	26.4	69.1	24.8	6.0	0.1	27.1	25.7
Georgia	2019	467	24.6	71.1	23.3	5.5	0.1	27.2	22.3
	2023	705	32.8	62.1	30.3	6.0	1.5	30.0	36.1
Hong Kong SAR	2019	462	35.8	60.3	33.6	6.1	0.0	31.4	39.4
	2023	638	41.9	54.5	39.2	6.3	0.0	42.1	41.6
Hungary	2019	651	36.0	62.8	35.4	1.8	0.0	33.2	39.1
	2023	772	39.6	59.2	38.8	2.1	0.0	39.8	39.4
Israel	2019	539	33.7	60.2	30.7	8.9	0.2	31.6	36.0
	2023	734	32.3	60.9	29.0	9.7	0.3	33.0	31.5
Italy	2019	522	37.3	52.6	31.2	16.0	0.1	33.5	41.2
	2023	650	31.8	57.6	26.8	15.6	0.0	28.3	35.3
Korea, Rep. of	2019	550	73.6	25.9	72.0	2.1	0.0	75.0	72.2
	2023	617	55.9	43.4	55.1	1.5	0.0	53.8	58.3
Lithuania	2019	549	30.4	67.8	29.6	2.5	0.0	28.0	33.0
	2023	776	25.4	71.5	24.3	4.3	0.0	30.0	20.8
Malaysia	2019	1009	24.6	73.1	23.8	3.1	0.0	20.6	28.8
	2023	1274	13.1	83.9	12.7	3.1	0.3	11.8	14.5
Norway (9)	2019	664	33.9	55.7	28.6	14.6	1.1	33.9	33.9
	2023	896	36.4	57.6	32.9	9.1	0.5	37.1	35.8
Portugal	2019	485	40.6	56.8	38.7	4.5	0.0	43.0	38.1
	2023	759	46.0	51.0	43.5	5.3	0.2	47.6	44.6
Qatar	2019	561	52.4	43.5	47.9	8.6	0.0	56.8	48.2
	2023	619	42.6	54.8	40.7	3.7	0.8	41.9	43.2
Singapore	2019	692	74.5	25.2	73.8	1.0	0.0	70.5	78.3
	2023	692	67.2	32.6	66.7	0.6	0.0	67.3	67.0
Sweden	2019	588	49.0	47.4	45.6	6.8	0.2	47.7	50.5
	2023	723	48.8	48.9	46.7	4.3	0.2	48.0	49.6
United Arab Emirates	2019	3204	37.3	58.1	34.5	7.3	0.1	39.6	35.1
	2023	4672	41.1	56.4	39.3	3.2	1.1	43.0	39.1
United States	2019	1258	52.0	47.0	50.9	1.7	0.4	54.4	49.6
	2023	1118	46.3	52.2	45.0	1.3	1.4	48.5	44.2
International Avg. (20)	2019	15193	40.6	55.6	38.3	5.9	0.2	40.2	41.0
	2023	19167	39.7	56.9	37.8	4.9	0.4	39.8	39.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SM4_06 SE72074: How planting trees benefits environment - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1168	29.5	62.9	26.3	10.8	0.1	32.9	26.3
	2023	1744	34.6	61.3	32.4	5.2	1.2	37.4	31.7
Dubai, UAE	2019	820	51.0	47.4	49.4	3.2	0.0	50.6	51.4
	2023	1161	54.3	44.5	52.8	1.3	1.4	53.6	54.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing
B_SM4_07 SE72091: Function of white blood cells - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	46.4	31.4	14.0	45.5	7.3	1.6	0.3	42.3	49.7
	2023	635	39.3	30.4	18.0	38.6	11.2	1.5	0.3	33.9	43.8
Chinese Taipei	2019	685	62.2	24.2	4.6	62.1	9.0	0.2	0.0	57.3	67.0
	2023	797	63.7	25.0	5.1	63.6	6.1	0.1	0.0	58.9	68.4
England	2019	482	62.9	12.1	14.6	61.4	9.5	1.3	1.2	59.2	66.8
	2023	620	63.7	13.5	16.3	63.0	6.1	1.0	0.1	61.5	66.0
Finland	2019	701	54.9	25.9	14.0	54.0	4.5	1.3	0.3	55.4	54.3
	2023	836	52.1	28.8	14.4	51.7	4.4	0.5	0.3	49.8	54.3
France	2019	546	50.6	23.1	17.5	50.0	8.2	0.9	0.3	47.6	53.9
	2023	634	53.2	20.4	17.3	52.6	8.6	0.9	0.2	49.8	56.8
Georgia	2019	467	34.5	27.7	15.0	33.1	20.2	3.9	0.1	32.6	36.1
	2023	705	32.4	32.4	15.2	31.7	18.4	0.7	1.6	29.5	35.8
Hong Kong SAR	2019	462	51.7	25.2	16.2	51.7	7.0	0.0	0.0	51.5	51.9
	2023	638	64.8	17.7	10.0	64.5	7.4	0.4	0.0	60.4	69.4
Hungary	2019	651	50.6	22.5	18.0	50.3	8.6	0.6	0.0	47.9	53.6
	2023	772	49.8	23.2	20.3	49.8	6.6	0.0	0.0	46.8	52.9
Israel	2019	539	56.1	25.1	11.3	55.6	7.1	0.7	0.2	55.0	57.3
	2023	735	47.7	25.8	16.7	47.0	9.2	0.9	0.5	43.1	52.1
Italy	2019	522	55.1	22.2	14.8	54.8	7.7	0.4	0.2	45.9	65.1
	2023	650	56.0	20.0	17.3	55.2	6.0	1.5	0.0	52.6	59.4
Korea, Rep. of	2019	550	61.9	26.9	5.4	61.5	5.6	0.5	0.0	56.1	67.2
	2023	617	61.9	26.4	7.5	61.8	4.0	0.2	0.0	56.5	67.8
Lithuania	2019	549	53.0	28.1	11.4	52.0	6.6	1.9	0.0	48.6	57.7
	2023	776	47.9	29.8	14.5	47.7	7.6	0.3	0.0	46.2	49.5
Malaysia	2019	1009	39.5	29.0	13.1	39.4	18.1	0.4	0.0	38.9	40.2
	2023	1273	38.2	24.3	15.9	37.9	21.0	0.3	0.6	36.1	40.5
Norway (9)	2019	664	36.6	35.0	19.4	35.8	7.4	1.2	1.2	32.1	41.6
	2023	896	31.7	35.8	22.5	31.3	9.1	0.7	0.6	26.9	35.9
Portugal	2019	485	46.3	27.4	19.7	46.1	6.4	0.4	0.0	44.6	48.0
	2023	759	47.4	26.2	21.1	46.9	4.8	0.7	0.2	39.9	54.3
Qatar	2019	561	40.1	31.4	13.9	39.9	14.2	0.6	0.0	38.1	42.0
	2023	619	45.6	33.5	12.5	45.1	7.7	0.4	0.8	44.6	46.6
Singapore	2019	692	78.3	10.4	5.2	78.1	6.0	0.3	0.0	73.2	83.2
	2023	692	78.2	11.3	5.7	78.2	4.8	0.0	0.0	74.5	81.9
Sweden	2019	588	46.2	31.6	14.8	45.1	6.1	2.0	0.3	39.3	53.8
	2023	723	50.4	28.7	15.0	49.8	5.5	0.7	0.3	49.1	51.6
United Arab Emirates	2019	3202	45.7	25.8	17.8	45.3	10.2	0.9	0.1	41.8	49.3
	2023	4672	49.3	23.8	15.8	48.1	9.9	1.0	1.4	45.2	53.2
United States	2019	1258	59.2	15.8	13.0	58.5	11.6	0.7	0.5	52.5	66.2
	2023	1118	56.5	17.3	17.1	55.5	8.4	0.3	1.5	52.5	60.3
International Avg. (20)	2019	15191	51.6	25.0	13.7	51.0	9.1	1.0	0.2	48.0	55.2
	2023	19167	51.5	24.7	14.9	51.0	8.3	0.6	0.4	47.9	55.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing
B_SM4_07 SE72091: Function of white blood cells - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1164	40.2	20.7	25.8	40.0	13.0	0.5	0.1	36.8	43.3
	2023	1744	43.7	20.9	20.6	42.7	13.3	0.8	1.6	40.3	47.2
Dubai, UAE	2019	820	59.2	23.4	9.9	58.7	7.1	0.9	0.1	53.6	64.4
	2023	1161	62.4	19.5	10.3	61.0	7.0	0.7	1.4	57.4	66.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Applying
B_SM4_08 SE72109: Place elements in periodic table - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	33.9	57.6	29.5	12.6	0.3	36.0	32.1
	2023	635	34.1	56.5	29.3	13.8	0.4	31.2	36.4
Chinese Taipei	2019	685	72.0	27.3	70.2	2.5	0.0	72.7	71.2
	2023	797	71.0	28.6	69.8	1.6	0.0	71.7	70.2
England	2019	482	48.9	46.3	44.3	8.2	1.2	54.2	43.4
	2023	620	46.3	51.3	44.3	4.1	0.3	41.7	51.2
Finland	2019	701	48.6	49.2	46.5	4.0	0.3	51.1	46.4
	2023	836	45.4	52.7	43.8	3.2	0.3	44.4	46.3
France	2019	546	20.8	64.7	17.0	17.8	0.5	18.4	23.1
	2023	634	28.3	62.9	24.8	12.1	0.2	28.7	27.9
Georgia	2019	468	49.7	43.4	42.9	13.5	0.1	52.0	47.6
	2023	705	53.8	38.1	44.3	15.9	1.7	58.2	48.9
Hong Kong SAR	2019	462	25.9	69.4	24.2	6.4	0.0	25.8	25.9
	2023	637	31.2	65.3	29.6	5.1	0.0	26.7	36.1
Hungary	2019	651	52.7	46.3	51.5	2.2	0.0	49.6	56.0
	2023	772	50.0	49.2	49.3	1.5	0.0	50.8	49.2
Israel	2019	539	43.3	53.0	40.4	6.5	0.2	47.1	39.2
	2023	734	36.6	58.1	33.5	7.4	1.0	35.1	38.1
Italy	2019	522	27.6	66.6	25.4	7.9	0.2	21.3	34.2
	2023	650	32.7	61.5	29.9	8.6	0.0	28.8	36.8
Korea, Rep. of	2019	550	57.9	40.2	55.2	4.5	0.0	56.9	58.8
	2023	617	46.6	50.8	44.2	5.0	0.0	44.0	49.4
Lithuania	2019	549	60.6	38.5	59.4	2.1	0.0	59.3	62.1
	2023	776	59.0	40.4	58.2	1.5	0.0	64.0	54.1
Malaysia	2019	1009	20.9	78.6	20.8	0.6	0.0	20.7	21.1
	2023	1274	19.7	78.7	19.3	1.1	0.9	20.0	19.4
Norway (9)	2019	664	55.5	40.4	50.3	8.0	1.2	58.5	52.2
	2023	896	50.5	46.3	47.1	5.7	0.9	50.0	50.8
Portugal	2019	485	17.8	75.6	16.4	8.0	0.0	18.7	16.8
	2023	759	26.6	69.5	25.2	5.1	0.2	26.4	26.8
Qatar	2019	561	27.4	67.7	25.6	6.7	0.0	26.2	28.5
	2023	619	26.3	70.8	25.3	2.8	1.2	24.1	28.5
Singapore	2019	692	63.7	35.5	62.4	2.1	0.0	64.6	62.9
	2023	692	55.5	44.2	55.1	0.7	0.0	51.3	59.6
Sweden	2019	588	32.4	60.3	28.9	9.8	0.9	29.2	36.1
	2023	723	33.9	61.2	31.5	6.9	0.4	31.4	36.5
United Arab Emirates	2019	3205	39.1	58.8	37.7	3.4	0.1	38.9	39.3
	2023	4671	45.5	52.2	43.6	2.3	1.9	46.9	44.2
United States	2019	1258	42.0	56.7	41.0	1.7	0.6	43.2	40.8
	2023	1118	38.3	59.9	37.2	1.2	1.6	37.5	39.3
International Avg. (20)	2019	15195	42.0	53.8	39.5	6.4	0.3	42.2	41.9
	2023	19165	41.6	54.9	39.3	5.3	0.6	40.6	42.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Applying
B_SM4_08 SE72109: Place elements in periodic table - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1168	32.6	65.1	31.4	3.4	0.1	34.0	31.3
	2023	1743	36.5	60.7	34.9	2.3	2.1	35.8	37.2
Dubai, UAE	2019	820	53.1	45.7	51.7	2.4	0.2	53.8	52.5
	2023	1161	57.0	41.5	54.9	2.0	1.7	58.8	55.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Science: Chemistry / Reasoning
B_SM4_09 SE72140: How substances are grouped - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	38.6	20.7	16.3	37.6	22.7	2.3	0.3	42.4	35.6
	2023	635	33.5	23.9	21.2	32.3	19.1	3.0	0.4	34.9	32.3
Chinese Taipei	2019	685	66.9	3.7	22.6	66.8	6.7	0.2	0.0	65.3	68.5
	2023	797	71.9	5.4	18.6	71.7	4.1	0.1	0.0	72.6	71.1
England	2019	482	51.1	14.8	17.3	48.2	14.1	4.2	1.3	50.4	51.7
	2023	620	57.9	13.7	13.6	56.9	14.2	1.1	0.6	58.4	57.3
Finland	2019	701	47.6	16.5	21.0	46.8	13.9	1.5	0.3	54.1	42.0
	2023	836	48.0	15.3	24.8	47.4	11.2	0.8	0.4	50.2	45.9
France	2019	546	40.9	26.1	17.4	40.0	14.3	1.6	0.5	47.0	34.1
	2023	634	41.4	24.3	18.9	41.0	14.9	0.6	0.4	44.7	37.8
Georgia	2019	467	46.4	18.5	21.1	44.5	11.9	3.7	0.4	51.0	42.4
	2023	705	42.2	21.1	20.9	40.3	13.2	2.3	2.3	43.8	40.3
Hong Kong SAR	2019	462	60.3	10.6	17.7	59.8	11.0	0.9	0.0	60.5	60.2
	2023	638	65.0	8.4	15.7	64.8	10.8	0.3	0.0	63.7	66.3
Hungary	2019	651	49.4	13.8	20.7	48.9	15.6	1.0	0.1	47.6	51.3
	2023	772	48.9	10.6	24.3	48.8	16.1	0.2	0.0	50.8	47.0
Israel	2019	539	48.6	18.6	20.7	47.9	11.3	1.3	0.2	50.6	46.5
	2023	735	48.3	20.4	17.2	47.2	13.0	1.3	1.1	48.8	47.8
Italy	2019	522	49.5	17.1	18.5	48.3	13.8	1.9	0.4	49.4	49.5
	2023	650	44.9	18.3	19.5	44.2	16.3	1.7	0.0	43.8	46.0
Korea, Rep. of	2019	550	58.2	8.7	19.5	58.0	13.4	0.4	0.0	56.8	59.4
	2023	617	61.1	7.9	18.8	60.7	11.9	0.7	0.0	61.0	61.3
Lithuania	2019	549	55.5	9.8	23.9	55.3	10.5	0.5	0.0	49.1	62.3
	2023	776	51.1	10.5	26.6	51.0	11.7	0.2	0.0	54.3	47.9
Malaysia	2019	1009	48.2	12.9	27.0	47.7	11.3	0.9	0.0	49.4	46.9
	2023	1273	45.1	15.4	23.0	44.5	15.9	0.2	1.0	48.0	41.9
Norway (9)	2019	664	54.6	18.9	13.7	52.4	11.0	2.8	1.2	54.3	54.9
	2023	896	47.0	21.5	15.2	45.7	14.9	1.5	1.2	52.0	42.5
Portugal	2019	485	41.4	13.5	24.0	40.7	20.3	1.5	0.0	39.3	43.4
	2023	759	37.9	16.5	26.0	37.5	18.9	0.7	0.4	37.2	38.6
Qatar	2019	561	39.0	17.8	26.5	38.6	16.1	0.9	0.0	38.6	39.3
	2023	619	47.3	15.2	19.3	46.5	17.3	0.6	1.2	50.4	44.4
Singapore	2019	692	59.6	6.9	25.9	59.0	7.2	1.0	0.0	58.6	60.6
	2023	692	60.7	7.3	23.5	60.7	8.4	0.1	0.0	60.0	61.4
Sweden	2019	588	54.6	15.4	15.1	51.8	12.6	4.1	1.1	57.2	51.8
	2023	723	58.2	13.4	15.6	57.1	11.9	1.5	0.4	60.3	56.2
United Arab Emirates	2019	3200	45.2	14.7	21.1	44.3	18.0	1.7	0.3	46.3	44.1
	2023	4672	48.5	12.2	19.5	47.0	18.4	0.7	2.3	48.2	48.7
United States	2019	1258	48.3	18.7	18.5	47.5	13.7	1.0	0.6	51.1	45.4
	2023	1118	48.2	17.8	19.7	47.2	13.2	0.3	1.7	45.3	51.0
International Avg. (20)	2019	15189	50.2	14.9	20.4	49.2	13.5	1.7	0.3	51.0	49.5
	2023	19167	50.3	15.0	20.1	49.6	13.8	0.9	0.7	51.4	49.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Reasoning

B_SM4_09 SE72140: How substances are grouped - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1165	38.8	16.7	23.4	38.1	20.0	1.5	0.2	41.4	36.3
	2023	1744	41.8	12.6	21.8	40.3	21.8	0.8	2.8	40.8	42.7
Dubai, UAE	2019	820	57.0	12.0	16.3	56.0	13.9	1.4	0.4	53.3	60.4
	2023	1161	59.3	10.7	16.9	57.9	12.1	0.6	1.8	58.4	60.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SM4_10 SE72132: Hydrangea colors in acidic soil - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	10.2	85.5	9.7	4.5	0.4	9.8	10.4
	2023	635	7.0	87.1	6.6	5.2	1.1	5.4	8.3
Chinese Taipei	2019	685	29.9	70.0	29.9	0.1	0.0	29.9	30.0
	2023	797	24.0	75.6	23.9	0.5	0.0	24.5	23.5
England	2019	482	17.8	77.6	16.8	3.8	1.8	17.8	17.7
	2023	620	24.6	74.0	24.1	1.3	0.6	18.5	31.0
Finland	2019	701	23.8	75.2	23.4	1.1	0.3	28.3	19.8
	2023	836	21.5	77.4	21.2	1.0	0.4	20.3	22.6
France	2019	546	15.2	82.8	14.8	1.8	0.5	15.9	14.3
	2023	634	9.2	89.4	9.1	1.1	0.4	9.7	8.7
Georgia	2019	468	6.3	87.9	5.9	5.8	0.4	7.5	5.3
	2023	705	3.6	89.2	3.4	5.0	2.4	2.2	5.3
Hong Kong SAR	2019	462	24.8	74.4	24.5	1.2	0.0	27.0	22.9
	2023	638	20.3	79.1	20.2	0.7	0.0	21.5	19.1
Hungary	2019	651	18.4	81.4	18.4	0.1	0.1	13.8	23.4
	2023	772	12.9	86.9	12.9	0.2	0.0	14.5	11.4
Israel	2019	539	9.8	87.5	9.5	2.8	0.2	7.8	12.0
	2023	734	5.4	91.2	5.2	2.4	1.2	4.3	6.4
Italy	2019	522	21.3	76.3	20.7	2.2	0.7	21.0	21.7
	2023	650	13.7	84.7	13.5	1.8	0.1	12.8	14.7
Korea, Rep. of	2019	550	7.1	92.4	7.1	0.5	0.0	6.7	7.6
	2023	617	3.1	95.9	3.1	1.1	0.0	1.2	5.1
Lithuania	2019	549	10.2	88.8	10.1	1.0	0.0	12.8	7.5
	2023	776	6.7	92.8	6.6	0.6	0.0	8.6	4.8
Malaysia	2019	1009	7.9	91.4	7.9	0.5	0.2	9.6	6.1
	2023	1274	4.7	93.8	4.7	0.4	1.1	4.6	4.9
Norway (9)	2019	664	27.5	69.7	26.4	2.7	1.2	29.3	25.5
	2023	896	19.7	76.9	18.8	2.8	1.4	20.0	19.4
Portugal	2019	485	22.2	77.6	22.1	0.3	0.0	20.6	23.8
	2023	759	19.0	80.1	18.8	0.7	0.4	20.8	17.3
Qatar	2019	561	7.5	91.5	7.4	1.0	0.0	8.8	6.3
	2023	619	13.1	85.5	12.9	0.5	1.2	13.0	13.1
Singapore	2019	692	42.7	57.0	42.4	0.6	0.0	42.9	42.4
	2023	692	36.8	63.1	36.8	0.2	0.0	36.3	37.3
Sweden	2019	588	27.4	70.0	26.5	2.4	1.1	28.9	25.8
	2023	723	29.1	68.7	28.2	2.7	0.4	33.0	25.3
United Arab Emirates	2019	3204	10.6	88.1	10.4	1.1	0.4	9.7	11.4
	2023	4672	12.8	84.0	12.3	1.1	2.6	11.3	14.2
United States	2019	1258	13.5	85.0	13.3	0.9	0.8	15.0	12.1
	2023	1118	12.3	85.6	12.0	0.7	1.8	11.2	13.4
International Avg. (20)	2019	15194	17.7	80.5	17.4	1.7	0.4	18.1	17.3
	2023	19167	15.0	83.0	14.7	1.5	0.8	14.7	15.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SM4_10 SE72132: Hydrangea colors in acidic soil - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1167	7.3	90.9	7.1	1.6	0.4	6.8	7.7
	2023	1744	9.3	86.9	9.0	1.0	3.1	8.9	9.7
Dubai, UAE	2019	820	21.2	77.9	21.0	0.6	0.4	18.2	24.0
	2023	1161	22.9	74.6	22.2	1.1	2.2	19.8	25.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SM4_11 SE72209: Process in section 2 of graph - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	45.4	44.1	12.7	34.1	6.3	2.4	0.5	36.5	52.6
	2023	635	43.5	42.0	16.1	32.4	6.1	1.7	1.8	37.3	48.5
Chinese Taipei	2019	685	61.8	61.6	8.6	23.0	6.5	0.3	0.0	63.9	59.7
	2023	797	63.2	63.2	9.2	22.5	5.1	0.0	0.0	59.8	66.5
England	2019	482	58.9	56.6	9.8	19.1	10.6	2.2	1.8	55.5	62.4
	2023	620	60.0	59.1	11.4	18.2	9.8	0.9	0.6	53.9	66.5
Finland	2019	701	59.1	58.2	11.1	17.3	11.8	1.1	0.4	62.2	56.3
	2023	836	57.1	56.5	13.3	18.6	10.5	0.6	0.4	53.6	60.4
France	2019	546	50.3	49.4	12.6	29.6	6.7	1.2	0.5	47.9	52.9
	2023	634	45.5	45.0	16.1	30.5	7.2	0.6	0.5	44.6	46.5
Georgia	2019	466	45.9	44.3	15.4	31.8	5.1	3.0	0.4	48.2	43.9
	2023	705	47.7	45.3	19.9	25.7	4.1	1.6	3.4	48.1	47.2
Hong Kong SAR	2019	462	53.2	52.7	10.7	28.7	7.0	0.9	0.0	49.4	56.3
	2023	638	46.8	46.6	8.1	36.1	8.6	0.3	0.3	42.6	51.3
Hungary	2019	651	50.4	50.3	16.1	22.0	11.4	0.1	0.1	49.1	51.8
	2023	772	47.6	47.6	15.7	24.8	12.0	0.0	0.0	45.8	49.3
Israel	2019	539	52.8	52.1	13.2	23.0	10.5	1.0	0.2	50.0	55.7
	2023	735	48.1	47.1	15.1	26.4	9.4	0.8	1.2	46.7	49.4
Italy	2019	522	44.0	42.9	13.0	31.7	9.9	1.7	0.7	42.0	46.0
	2023	650	46.5	46.0	12.6	29.3	11.1	0.9	0.2	43.8	49.3
Korea, Rep. of	2019	550	66.1	66.0	7.6	21.6	4.6	0.2	0.0	63.4	68.6
	2023	617	69.4	69.1	8.7	19.7	2.1	0.4	0.0	71.5	67.2
Lithuania	2019	549	54.3	53.8	9.8	23.5	11.9	1.0	0.0	50.4	58.4
	2023	776	49.9	49.8	12.5	24.0	13.4	0.2	0.0	46.0	53.7
Malaysia	2019	1009	53.4	53.2	14.1	23.9	8.4	0.2	0.2	55.1	51.6
	2023	1273	38.6	37.7	18.4	32.0	9.6	0.8	1.5	38.8	38.4
Norway (9)	2019	664	59.1	56.2	14.1	13.6	11.2	3.1	1.7	62.0	56.0
	2023	896	57.3	56.0	14.0	18.8	9.0	0.5	1.7	57.8	56.8
Portugal	2019	485	50.6	50.1	13.9	27.6	7.5	1.0	0.0	44.7	56.5
	2023	759	49.6	49.2	13.7	30.8	5.6	0.3	0.5	46.3	52.7
Qatar	2019	561	45.2	44.6	15.5	25.1	13.4	1.3	0.0	48.2	42.5
	2023	619	41.5	40.8	17.1	29.1	11.3	0.6	1.2	37.4	45.4
Singapore	2019	692	67.2	66.8	5.6	20.1	7.0	0.5	0.0	65.8	68.5
	2023	692	69.3	69.3	6.0	19.2	5.5	0.0	0.0	69.5	69.0
Sweden	2019	588	58.4	56.3	13.4	13.6	13.1	2.2	1.4	59.3	57.4
	2023	723	54.3	53.3	16.5	18.9	9.5	1.2	0.6	47.8	60.6
United Arab Emirates	2019	3203	42.4	41.7	16.2	26.9	13.5	1.3	0.5	40.3	44.3
	2023	4671	47.8	45.9	16.4	23.3	10.5	1.0	2.9	43.9	51.6
United States	2019	1258	48.6	47.9	12.0	21.7	16.8	0.8	0.8	47.0	50.3
	2023	1118	50.4	49.1	12.7	25.0	10.7	0.5	2.0	46.8	54.0
International Avg. (20)	2019	15191	53.3	52.4	12.3	23.9	9.7	1.3	0.5	52.0	54.6
	2023	19166	51.7	50.9	13.7	25.3	8.6	0.6	0.9	49.1	54.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SM4_11 SE72209: Process in section 2 of graph - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1166	32.4	31.8	20.6	30.2	15.6	1.3	0.5	32.8	32.0
	2023	1744	40.9	38.9	21.1	23.6	11.6	1.4	3.3	37.6	44.0
Dubai, UAE	2019	820	56.5	56.0	10.8	17.8	14.4	0.6	0.4	53.2	59.6
	2023	1161	58.7	56.9	10.2	19.5	10.4	0.6	2.5	53.9	62.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SM4_12 SE72210: Ice cubes that will melt faster - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	22.9	55.2	39.6	2.5	2.0	0.6	23.5	22.4
	2023	635	19.2	60.2	34.8	1.1	2.0	1.9	20.1	18.5
Chinese Taipei	2019	685	60.2	31.6	16.2	51.9	0.3	0.0	62.0	58.5
	2023	797	63.5	28.6	15.8	55.5	0.2	0.0	62.8	64.1
England	2019	482	26.6	57.7	26.8	12.3	1.4	1.8	30.7	22.4
	2023	620	26.8	57.0	30.3	11.2	0.9	0.6	29.4	24.0
Finland	2019	701	38.7	36.3	49.2	13.8	0.3	0.4	40.3	37.2
	2023	836	37.0	38.0	48.7	12.3	0.5	0.4	38.6	35.6
France	2019	546	28.1	47.8	46.2	4.7	0.6	0.7	29.2	27.0
	2023	633	27.1	50.3	43.3	5.1	0.6	0.6	28.6	25.5
Georgia	2019	466	24.5	52.6	42.6	2.7	1.7	0.4	26.2	23.0
	2023	705	20.5	59.5	30.5	4.0	2.2	3.8	22.1	18.7
Hong Kong SAR	2019	462	39.9	49.5	20.3	29.3	0.9	0.0	45.0	35.6
	2023	638	36.3	51.5	23.9	24.2	0.1	0.3	34.4	38.3
Hungary	2019	651	34.5	43.5	43.5	12.6	0.1	0.2	34.4	34.7
	2023	772	31.7	49.1	38.5	12.4	0.0	0.0	32.7	30.7
Israel	2019	539	25.1	57.7	30.9	9.0	2.2	0.2	27.1	22.9
	2023	734	23.6	56.7	35.2	5.3	1.3	1.5	27.4	19.8
Italy	2019	522	25.1	53.1	40.0	4.6	1.3	1.0	28.3	21.9
	2023	650	21.3	59.9	36.1	3.1	0.7	0.2	22.9	19.7
Korea, Rep. of	2019	550	39.5	43.6	33.3	22.7	0.5	0.0	38.3	40.6
	2023	617	32.9	51.0	30.5	17.2	1.2	0.0	35.5	30.0
Lithuania	2019	549	33.0	44.2	45.1	10.3	0.4	0.0	33.0	32.9
	2023	776	27.6	52.5	39.8	7.7	0.0	0.0	30.5	24.8
Malaysia	2019	1009	30.8	54.7	28.3	16.5	0.4	0.2	33.3	28.2
	2023	1274	22.7	58.0	35.0	4.7	0.1	2.2	24.2	21.0
Norway (9)	2019	664	34.9	42.0	42.2	12.7	1.2	1.9	37.3	32.3
	2023	896	35.3	41.4	43.9	12.6	0.4	1.7	38.0	32.8
Portugal	2019	485	32.7	40.5	52.5	6.2	0.8	0.0	35.5	29.9
	2023	759	28.8	47.2	46.1	5.4	0.7	0.7	32.4	25.4
Qatar	2019	561	21.9	61.2	32.6	5.5	0.7	0.0	25.7	18.5
	2023	619	25.8	55.3	35.2	7.8	0.4	1.4	28.7	23.1
Singapore	2019	692	63.1	31.2	11.2	57.3	0.3	0.0	61.9	64.2
	2023	692	65.9	28.4	11.4	60.2	0.0	0.0	65.0	66.8
Sweden	2019	588	37.4	39.8	42.3	15.3	1.0	1.7	41.7	32.8
	2023	723	33.2	47.5	37.2	14.2	0.3	0.8	36.9	29.6
United Arab Emirates	2019	3204	27.2	53.4	36.7	8.5	0.8	0.6	32.8	22.2
	2023	4672	24.2	59.4	26.1	10.2	0.9	3.4	28.2	20.5
United States	2019	1258	36.0	39.1	48.4	11.3	0.3	0.9	38.8	33.1
	2023	1118	30.0	49.7	36.8	10.8	0.5	2.3	32.5	27.6
International Avg. (20)	2019	15192	34.1	46.7	36.4	15.5	0.9	0.5	36.2	32.0
	2023	19166	31.7	50.1	33.9	14.2	0.7	1.1	33.5	29.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SM4_12 SE72210: Ice cubes that will melt faster - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1168	22.2	59.5	34.1	4.8	0.9	0.6	30.0	14.9
	2023	1744	20.0	62.2	27.1	5.5	1.1	4.1	24.2	16.0
Dubai, UAE	2019	820	34.2	46.7	36.7	15.4	0.5	0.6	37.7	31.0
	2023	1161	30.7	54.7	24.2	17.5	0.9	2.8	33.2	28.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Knowing

B_SM4_13 SE72249: Sounds made by shortest and longest bars of a xylophone - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	31.9	13.0	23.1	30.1	31.0	1.9	0.9	36.9	27.8
	2023	635	31.2	17.6	25.3	24.2	30.3	0.6	2.1	34.4	28.5
Chinese Taipei	2019	685	71.3	6.4	4.4	17.8	71.0	0.3	0.0	72.2	70.3
	2023	797	75.4	7.6	4.1	12.9	75.3	0.1	0.0	78.7	72.3
England	2019	482	56.1	9.6	10.1	22.7	54.2	1.6	1.8	58.9	53.2
	2023	620	54.1	8.2	12.4	24.7	53.4	0.4	0.8	56.0	52.0
Finland	2019	701	67.2	8.2	6.3	17.8	66.4	0.9	0.4	74.2	61.0
	2023	836	63.0	9.0	8.5	19.1	62.3	0.6	0.4	65.6	60.5
France	2019	546	62.3	7.0	11.6	18.2	60.9	1.5	0.7	64.3	60.1
	2023	634	57.2	9.7	14.0	18.5	56.3	0.5	1.0	61.9	52.2
Georgia	2019	468	19.1	22.8	33.6	22.5	18.6	2.2	0.4	23.5	15.2
	2023	705	21.9	20.8	27.2	25.4	20.6	1.7	4.3	24.0	19.5
Hong Kong SAR	2019	462	59.0	10.7	11.1	18.8	58.5	0.8	0.2	61.7	56.7
	2023	638	50.9	9.4	10.0	29.5	50.7	0.1	0.3	50.6	51.3
Hungary	2019	651	48.3	8.8	8.1	34.3	47.8	0.8	0.2	52.6	43.5
	2023	772	47.5	7.8	13.3	31.1	47.3	0.5	0.0	49.7	45.2
Israel	2019	539	35.4	14.2	17.2	32.7	35.2	0.5	0.2	33.0	38.1
	2023	735	33.0	13.6	16.9	34.5	32.0	1.1	1.9	34.0	32.1
Italy	2019	522	45.0	11.1	17.0	26.0	44.2	0.7	1.0	46.9	43.0
	2023	650	41.7	16.7	14.2	26.7	41.3	0.7	0.3	46.8	36.5
Korea, Rep. of	2019	550	54.2	11.2	5.1	29.2	53.8	0.7	0.0	55.6	52.9
	2023	617	59.8	10.7	4.5	24.7	59.4	0.6	0.0	57.7	62.0
Lithuania	2019	549	38.9	11.4	12.8	36.4	38.6	0.7	0.0	38.7	39.1
	2023	776	43.4	10.4	13.4	32.6	43.2	0.4	0.0	49.3	37.6
Malaysia	2019	1009	27.6	20.8	26.5	24.7	27.5	0.2	0.3	31.4	23.5
	2023	1273	24.7	20.1	24.5	28.4	23.9	0.8	2.3	25.4	23.9
Norway (9)	2019	664	43.5	14.2	11.9	28.6	42.1	1.4	1.9	42.7	44.3
	2023	896	35.6	14.0	18.8	29.4	34.4	1.6	1.8	34.8	36.3
Portugal	2019	485	48.7	11.5	19.7	19.6	48.1	1.1	0.0	51.8	45.6
	2023	759	47.7	11.5	16.9	23.0	47.0	0.9	0.8	52.0	43.8
Qatar	2019	561	24.5	20.8	28.0	25.7	24.2	1.3	0.0	24.5	24.6
	2023	619	25.2	19.3	27.4	26.6	24.7	0.2	1.7	30.0	20.7
Singapore	2019	692	64.2	6.9	7.4	21.3	63.7	0.8	0.0	67.2	61.4
	2023	692	62.1	7.9	7.8	22.1	62.0	0.1	0.0	67.7	56.6
Sweden	2019	588	49.6	14.5	10.8	23.1	47.6	2.4	1.7	51.8	47.2
	2023	723	43.7	12.6	14.4	28.3	42.9	1.0	0.8	44.9	42.6
United Arab Emirates	2019	3200	26.8	19.7	27.3	24.7	26.3	1.4	0.6	30.3	23.6
	2023	4672	31.5	17.6	23.3	24.3	30.0	0.9	3.9	32.8	30.2
United States	2019	1258	61.2	8.1	13.8	16.2	60.0	0.9	0.9	63.0	59.2
	2023	1118	60.2	9.0	12.7	16.9	58.4	0.5	2.5	63.2	57.2
International Avg. (20)	2019	15190	46.7	12.5	15.3	24.5	46.0	1.1	0.6	49.1	44.5
	2023	19167	45.5	12.7	15.5	25.1	44.8	0.7	1.2	48.0	43.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Knowing

B_SM4_13 SE72249: Sounds made by shortest and longest bars of a xylophone - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1165	25.0	19.0	28.2	26.3	24.5	1.4	0.6	26.9	23.2
	2023	1744	28.5	16.8	25.6	25.2	27.0	0.6	4.8	31.1	26.0
Dubai, UAE	2019	820	38.9	16.3	20.8	23.0	38.3	1.0	0.6	43.4	34.7
	2023	1161	45.1	13.7	16.9	21.8	43.0	1.3	3.3	47.4	43.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing

B_SM4_14 SE72323: Conditions where rock will weather the fastest - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	45.4	20.3	44.1	11.7	20.8	1.9	1.1	44.1	46.6
	2023	635	45.0	20.1	43.1	13.6	19.0	1.9	2.4	40.0	49.0
Chinese Taipei	2019	685	69.2	16.8	68.8	5.0	8.8	0.4	0.2	64.8	73.5
	2023	797	74.0	13.2	73.8	4.0	8.7	0.3	0.0	72.4	75.5
England	2019	482	47.4	13.7	44.8	12.7	23.5	3.4	1.9	45.0	49.7
	2023	620	49.8	12.6	48.8	10.6	26.1	1.1	0.8	52.8	46.7
Finland	2019	701	57.3	27.2	56.4	4.9	10.0	1.2	0.4	57.6	57.1
	2023	836	55.7	25.3	54.9	7.8	10.6	0.9	0.4	54.0	57.4
France	2019	546	62.1	12.5	60.4	9.1	15.3	1.6	1.1	60.4	63.9
	2023	634	59.0	12.9	57.0	12.2	14.5	2.1	1.2	58.9	59.1
Georgia	2019	467	42.0	28.9	40.5	11.9	15.1	2.8	0.8	39.0	44.5
	2023	705	36.1	37.1	34.3	10.7	12.8	0.5	4.6	35.1	37.3
Hong Kong SAR	2019	462	46.8	21.9	46.3	16.6	14.0	0.8	0.3	43.3	49.8
	2023	638	48.9	26.5	48.6	12.4	11.8	0.5	0.3	46.0	52.0
Hungary	2019	651	64.4	16.3	63.7	5.6	13.4	0.9	0.2	63.0	65.8
	2023	772	62.6	17.4	62.6	8.3	11.8	0.0	0.0	68.5	56.6
Israel	2019	539	53.5	18.5	52.7	9.5	17.8	1.4	0.2	54.7	52.2
	2023	734	49.0	19.0	47.2	12.0	18.0	1.5	2.1	52.0	46.1
Italy	2019	522	62.2	9.8	61.0	6.6	20.7	0.7	1.2	58.4	66.2
	2023	650	59.3	11.1	58.2	7.8	20.9	1.3	0.7	58.1	60.6
Korea, Rep. of	2019	550	59.4	13.5	59.2	11.9	15.2	0.2	0.0	56.5	62.0
	2023	617	64.6	11.3	64.5	11.2	12.9	0.2	0.0	63.6	65.7
Lithuania	2019	549	63.2	21.6	62.8	6.4	8.6	0.6	0.0	64.1	62.2
	2023	776	54.5	23.4	54.2	9.9	11.9	0.5	0.0	53.0	56.0
Malaysia	2019	1009	46.4	17.6	46.1	14.2	21.4	0.3	0.4	47.0	45.8
	2023	1273	41.6	18.9	40.0	20.0	17.2	0.7	3.0	42.8	40.3
Norway (9)	2019	664	57.5	15.0	54.1	7.8	17.2	3.7	2.2	58.3	56.8
	2023	896	55.9	16.0	53.7	10.2	16.2	1.8	2.0	57.0	54.8
Portugal	2019	485	66.7	9.8	66.4	6.9	16.4	0.5	0.0	67.2	66.3
	2023	759	67.2	10.6	66.2	6.6	15.1	0.3	1.1	64.2	70.0
Qatar	2019	561	43.1	19.7	41.9	13.6	22.1	2.0	0.7	43.6	42.6
	2023	619	46.0	18.9	44.8	14.4	19.3	0.9	1.7	43.7	48.1
Singapore	2019	692	61.9	17.3	61.3	6.8	13.7	0.6	0.3	59.5	64.1
	2023	692	61.2	18.9	61.1	7.0	12.7	0.3	0.0	56.2	66.1
Sweden	2019	588	54.3	19.0	51.3	9.1	15.0	3.0	2.6	52.8	55.9
	2023	723	51.4	17.9	50.1	11.9	17.5	1.5	1.1	54.6	48.4
United Arab Emirates	2019	3199	49.6	18.2	48.2	14.3	16.6	1.9	0.8	50.8	48.4
	2023	4672	53.0	16.3	50.1	13.0	15.1	0.9	4.6	52.4	53.6
United States	2019	1258	58.5	9.8	57.4	10.8	20.1	0.7	1.2	59.9	57.1
	2023	1118	57.7	13.4	55.8	10.5	17.0	0.4	2.9	57.4	58.0
International Avg. (20)	2019	15188	55.5	17.4	54.4	9.8	16.3	1.4	0.8	54.5	56.5
	2023	19166	54.6	18.0	53.4	10.7	15.5	0.9	1.4	54.1	55.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Science: Earth Science / Knowing

B_SM4_14 SE72323: Conditions where rock will weather the fastest - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1164	42.5	17.0	41.4	17.4	21.6	1.8	0.9	43.8	41.3
	2023	1744	45.8	14.4	42.9	17.5	18.8	1.0	5.4	43.8	47.8
Dubai, UAE	2019	820	60.2	14.9	58.8	9.2	14.8	1.7	0.6	59.4	60.9
	2023	1161	60.7	14.0	57.8	8.1	15.4	0.6	4.2	60.0	61.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Reasoning

B_SM4_15 SE72368: Position of Moon when Jill took her photo - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	68.6	16.3	8.9	66.4	5.2	2.0	1.2	64.8	71.6
	2023	635	64.0	17.7	10.2	61.4	6.6	1.5	2.5	57.2	69.4
Chinese Taipei	2019	685	70.2	16.7	7.3	69.7	5.5	0.5	0.2	66.0	74.3
	2023	797	74.4	17.5	4.4	74.4	3.6	0.0	0.0	73.4	75.5
England	2019	482	73.0	12.4	8.5	70.4	5.1	1.7	1.9	67.4	78.7
	2023	620	74.0	13.3	5.5	72.8	6.8	0.7	1.0	71.5	76.7
Finland	2019	701	78.9	11.6	6.8	78.1	2.5	0.6	0.4	78.1	79.6
	2023	836	78.5	11.3	8.0	78.0	2.1	0.3	0.4	76.2	80.8
France	2019	546	77.7	11.9	5.2	76.3	4.8	0.4	1.4	75.7	79.9
	2023	634	74.5	14.3	5.5	73.3	5.3	0.2	1.4	73.9	75.1
Georgia	2019	467	57.7	24.2	12.3	56.9	5.3	0.3	1.0	50.5	64.0
	2023	705	56.8	20.1	13.7	53.7	7.0	0.7	4.7	51.3	63.1
Hong Kong SAR	2019	462	73.1	17.1	5.0	72.7	4.6	0.0	0.5	71.5	74.4
	2023	638	70.0	18.2	6.3	69.3	5.2	0.5	0.4	65.6	74.6
Hungary	2019	651	74.4	12.3	7.5	74.2	5.8	0.0	0.2	65.6	83.9
	2023	772	78.0	11.4	6.7	78.0	3.9	0.0	0.0	73.4	82.7
Israel	2019	539	58.7	22.8	10.3	58.4	8.0	0.3	0.2	51.9	66.0
	2023	735	55.9	20.1	14.4	54.2	8.3	0.6	2.3	52.5	59.2
Italy	2019	522	74.0	12.2	8.3	72.7	5.0	0.6	1.2	70.2	78.0
	2023	650	75.1	10.1	7.1	73.8	7.3	0.1	1.5	73.8	76.3
Korea, Rep. of	2019	550	79.7	13.8	4.2	79.5	2.3	0.2	0.0	76.2	82.9
	2023	617	82.0	12.4	3.5	81.7	2.0	0.4	0.0	83.0	80.9
Lithuania	2019	549	80.3	11.5	4.2	79.8	3.9	0.6	0.0	74.5	86.3
	2023	776	79.0	12.4	5.8	79.0	2.8	0.0	0.0	77.2	80.7
Malaysia	2019	1009	70.2	16.6	8.6	69.9	4.4	0.0	0.5	67.2	73.5
	2023	1273	63.2	18.6	10.3	60.8	6.5	0.3	3.5	59.6	67.0
Norway (9)	2019	664	78.2	12.6	6.0	76.1	2.5	0.6	2.2	75.7	81.2
	2023	896	76.5	11.5	8.9	74.5	2.6	0.4	2.1	73.2	79.3
Portugal	2019	485	76.0	11.9	6.6	75.6	5.3	0.5	0.0	71.3	80.7
	2023	759	72.7	13.8	7.4	71.4	5.6	0.6	1.1	69.3	75.8
Qatar	2019	561	56.6	24.7	12.4	55.7	5.5	0.9	0.7	56.9	56.3
	2023	619	62.0	17.4	11.1	60.7	8.7	0.3	1.9	62.2	61.9
Singapore	2019	692	68.6	20.2	5.2	68.3	5.8	0.1	0.3	64.1	72.9
	2023	692	71.7	17.0	5.6	71.7	5.8	0.0	0.0	66.9	76.3
Sweden	2019	588	82.2	8.7	5.3	78.5	3.0	1.8	2.6	81.5	82.9
	2023	723	77.9	11.6	6.8	77.0	3.3	0.1	1.2	76.6	79.3
United Arab Emirates	2019	3200	63.9	18.9	10.0	62.7	6.6	0.8	1.1	62.9	64.8
	2023	4670	65.6	17.8	8.8	61.9	5.8	0.7	4.9	63.1	67.9
United States	2019	1258	77.0	14.8	4.5	75.7	3.4	0.5	1.2	76.5	77.5
	2023	1118	75.7	12.4	7.0	73.0	4.0	0.5	3.1	72.6	78.8
International Avg. (20)	2019	15189	71.9	15.6	7.4	70.9	4.7	0.6	0.8	68.4	75.5
	2023	19165	71.4	15.0	7.8	70.0	5.2	0.4	1.6	68.6	74.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Reasoning
B_SM4_15 SE72368: Position of Moon when Jill took her photo - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1164	58.7	21.2	12.1	57.5	7.1	1.1	0.9	60.5	57.0
	2023	1743	62.3	17.5	12.0	58.3	5.7	0.6	5.9	60.8	63.8
Dubai, UAE	2019	820	75.1	14.2	6.5	74.1	3.9	0.5	0.9	71.5	78.4
	2023	1161	75.0	13.7	6.0	71.3	4.2	0.5	4.4	68.6	80.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Applying
B_SM4_16 SE72303: Diagram best representing Earth - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	578	28.6	41.4	21.1	6.1	27.4	2.1	1.8	18.3	36.8
	2023	635	24.2	41.3	19.3	11.0	22.9	2.4	3.2	20.3	27.3
Chinese Taipei	2019	685	24.6	35.2	29.6	10.1	24.5	0.4	0.2	21.9	27.3
	2023	797	28.9	33.1	28.6	9.1	28.8	0.4	0.0	19.9	37.7
England	2019	482	47.8	26.6	16.8	6.7	45.8	1.9	2.2	45.2	50.4
	2023	620	51.0	31.5	9.8	6.7	49.9	1.1	1.0	55.1	46.7
Finland	2019	701	40.5	34.8	18.0	5.9	40.0	0.7	0.5	36.4	44.1
	2023	836	40.5	29.9	20.6	8.2	39.9	0.9	0.4	34.1	46.6
France	2019	546	31.7	27.7	28.5	10.1	30.8	1.4	1.6	29.3	34.3
	2023	634	25.8	30.9	29.1	12.4	25.2	0.9	1.4	23.9	27.9
Georgia	2019	467	24.9	29.7	23.6	18.9	23.9	3.0	1.0	23.4	26.1
	2023	705	24.5	26.4	28.0	14.2	22.3	4.4	4.8	23.1	26.2
Hong Kong SAR	2019	462	46.5	29.0	15.7	8.4	46.2	0.2	0.5	46.3	46.8
	2023	638	49.1	28.7	14.9	6.9	48.7	0.4	0.4	45.8	52.7
Hungary	2019	651	37.9	22.7	29.2	9.7	37.6	0.6	0.2	31.8	44.4
	2023	772	33.9	22.9	29.4	13.6	33.8	0.6	0.0	30.5	37.5
Israel	2019	539	32.8	32.6	25.1	8.1	32.1	1.8	0.3	32.7	32.8
	2023	734	28.1	25.1	31.1	13.2	27.1	0.9	2.6	26.3	29.9
Italy	2019	522	35.8	36.8	17.8	8.5	35.1	0.2	1.5	34.9	36.6
	2023	650	38.9	26.8	23.2	8.9	37.5	2.1	1.6	36.9	40.9
Korea, Rep. of	2019	550	51.4	22.0	18.9	7.5	51.2	0.3	0.0	46.1	56.3
	2023	617	54.4	16.2	21.3	7.8	54.0	0.7	0.0	53.0	55.9
Lithuania	2019	549	38.9	31.2	20.1	9.1	38.4	1.2	0.0	36.4	41.4
	2023	776	33.8	25.4	27.0	13.6	33.7	0.5	0.0	32.8	34.7
Malaysia	2019	1009	28.3	37.8	22.3	10.7	28.0	0.7	0.5	26.0	30.8
	2023	1273	25.3	33.7	25.1	12.6	24.1	0.6	3.8	22.7	28.0
Norway (9)	2019	664	38.0	33.0	17.8	8.6	36.4	2.0	2.2	38.4	37.7
	2023	896	37.2	29.9	20.3	10.1	35.6	1.8	2.3	33.2	40.7
Portugal	2019	485	32.4	30.6	29.3	7.4	32.3	0.0	0.4	29.9	34.9
	2023	759	30.6	36.9	21.9	8.8	29.7	1.0	1.7	27.7	33.2
Qatar	2019	561	30.6	33.5	23.4	10.8	29.9	1.3	1.0	31.1	30.2
	2023	619	30.7	30.1	25.5	12.1	29.9	0.6	1.9	34.4	27.2
Singapore	2019	692	29.1	37.3	23.5	9.4	28.7	0.8	0.3	24.6	33.3
	2023	692	25.8	44.4	20.8	8.9	25.8	0.2	0.0	22.5	29.0
Sweden	2019	588	35.3	34.7	21.3	5.9	33.7	1.4	2.9	35.1	35.4
	2023	723	44.6	28.9	17.8	7.5	43.6	1.1	1.2	45.3	43.9
United Arab Emirates	2019	3203	42.6	27.1	17.2	11.8	41.7	0.9	1.2	44.2	41.3
	2023	4672	38.3	27.6	18.5	11.7	35.8	1.0	5.5	38.6	37.9
United States	2019	1258	52.8	24.3	14.8	7.0	51.6	0.8	1.5	47.9	57.8
	2023	1118	46.2	26.4	16.3	8.7	44.3	0.9	3.4	44.2	48.4
International Avg. (20)	2019	15192	36.5	31.4	21.7	9.0	35.8	1.1	1.0	34.0	38.9
	2023	19166	35.6	29.8	22.4	10.3	34.6	1.1	1.8	33.5	37.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Applying
B_SM4_16 SE72303: Diagram best representing Earth - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1165	36.4	30.1	16.5	15.7	35.7	1.0	1.0	36.9	36.0
	2023	1744	31.4	26.9	20.4	16.4	29.2	0.6	6.4	31.0	31.9
Dubai, UAE	2019	820	53.6	25.1	13.7	6.9	52.9	0.5	1.0	54.9	52.5
	2023	1161	49.0	28.3	14.8	5.3	46.4	0.3	4.9	47.5	50.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing

B_SE2_01 SE72078: Plant part that releases water - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	47.0	46.2	41.0	12.6	0.2	50.8	43.5
	2023	631	38.5	51.3	32.1	16.6	0.0	41.4	35.7
Chinese Taipei	2019	704	59.6	39.0	57.6	3.3	0.1	54.3	65.0
	2023	475	56.1	42.6	54.4	3.0	0.0	59.4	52.7
England	2019	462	45.0	48.3	39.5	12.0	0.1	44.4	45.7
	2023	583	42.4	54.7	40.2	4.8	0.2	39.4	45.3
Finland	2019	704	56.7	40.4	53.0	6.3	0.3	66.6	48.1
	2023	806	50.2	47.9	48.3	3.4	0.4	54.9	45.2
France	2019	551	29.8	59.7	25.4	14.6	0.3	31.5	28.4
	2023	642	27.6	62.1	23.7	14.2	0.0	29.3	25.9
Georgia	2019	470	40.4	45.0	30.5	24.2	0.2	34.4	45.7
	2023	676	44.8	42.4	34.4	23.2	0.1	52.0	37.4
Hong Kong SAR	2019	472	43.6	52.2	40.3	7.5	0.0	43.7	43.5
	2023	620	43.7	52.9	41.1	5.8	0.3	38.6	49.0
Hungary	2019	652	59.8	36.9	54.8	8.3	0.0	61.3	58.3
	2023	747	55.8	40.8	51.5	7.7	0.0	59.8	51.5
Israel	2019	536	41.7	50.5	36.1	13.4	0.0	46.6	36.4
	2023	723	28.2	62.8	24.6	12.1	0.5	27.2	29.2
Italy	2019	518	56.5	39.5	51.4	9.1	0.0	64.3	49.8
	2023	638	55.5	39.9	49.8	10.4	0.0	58.5	52.3
Korea, Rep. of	2019	552	54.4	43.6	52.0	4.4	0.0	51.3	57.4
	2023	358	65.8	33.0	63.4	3.3	0.3	64.0	67.6
Lithuania	2019	544	60.2	36.0	54.6	9.3	0.0	59.7	60.8
	2023	768	58.9	37.3	53.4	9.4	0.0	66.0	51.8
Malaysia	2019	1019	32.9	66.0	32.4	1.5	0.0	35.6	30.0
	2023	1230	24.7	73.9	24.3	1.8	0.0	26.9	22.4
Norway (9)	2019	654	34.6	55.5	29.4	14.9	0.3	39.0	30.1
	2023	887	32.4	58.9	28.2	12.2	0.6	38.7	26.9
Portugal	2019	488	62.7	34.7	58.2	7.1	0.0	62.4	63.0
	2023	756	50.5	45.0	46.0	9.0	0.0	51.1	50.1
Qatar	2019	559	47.0	46.3	41.1	11.9	0.7	53.5	39.6
	2023	599	42.2	52.6	38.4	8.8	0.3	42.0	42.3
Singapore	2019	702	81.7	18.0	80.7	1.2	0.1	82.9	80.7
	2023	401	82.0	18.0	81.7	0.3	0.0	84.6	79.4
Sweden	2019	574	43.2	50.1	38.1	11.1	0.7	41.6	44.9
	2023	692	40.1	54.6	36.5	8.1	0.8	45.3	34.9
United Arab Emirates	2019	3178	43.6	53.0	41.1	5.9	0.0	47.1	40.4
	2023	5321	44.8	52.2	42.3	5.4	0.1	48.0	41.7
United States	2019	1242	40.7	58.0	39.8	2.0	0.2	44.4	36.7
	2023	1153	36.6	61.5	35.5	2.5	0.5	36.4	36.7
International Avg. (20)	2019	15162	49.1	46.0	44.9	9.0	0.2	50.8	47.4
	2023	18706	46.0	49.2	42.5	8.1	0.2	48.2	43.9

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Science: Biology / Knowing
B_SE2_01 SE72078: Plant part that releases water - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	31.1	65.4	29.5	5.1	0.0	34.2	28.4
	2023	2422	34.7	61.1	32.5	6.2	0.2	38.0	31.6
Dubai, UAE	2019	814	63.4	34.6	60.0	5.4	0.0	65.2	61.4
	2023	1161	61.0	37.2	58.1	4.7	0.0	63.0	59.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying

B_SE2_02 SE72460: Human activity that can cause algal blooms - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	51.1	49.6	13.2	3.0	31.3	2.7	0.2	48.4	53.7
	2023	631	50.4	49.1	13.9	4.0	30.5	2.6	0.0	50.4	50.4
Chinese Taipei	2019	704	70.4	70.2	12.6	4.5	12.4	0.2	0.1	68.6	72.2
	2023	475	73.3	73.3	11.8	4.5	10.4	0.0	0.0	71.8	74.9
England	2019	462	46.7	45.8	22.7	3.4	26.4	1.5	0.3	44.4	49.6
	2023	583	56.4	56.1	16.8	4.5	22.1	0.1	0.3	51.1	61.4
Finland	2019	704	67.7	67.2	20.7	3.9	7.4	0.5	0.3	64.6	70.5
	2023	806	60.7	59.7	22.8	5.1	10.8	1.0	0.5	58.4	63.1
France	2019	551	53.8	53.0	15.3	5.4	24.7	0.9	0.5	55.2	52.6
	2023	642	48.7	48.3	16.2	4.8	29.9	0.8	0.0	42.6	55.0
Georgia	2019	469	48.1	46.6	16.2	9.9	24.3	2.8	0.2	47.3	48.8
	2023	676	49.4	48.9	19.3	7.4	23.5	0.8	0.1	54.3	44.3
Hong Kong SAR	2019	472	59.9	59.0	17.9	8.3	13.3	1.5	0.0	59.0	60.7
	2023	620	67.9	67.8	16.3	4.5	11.2	0.0	0.3	67.0	68.9
Hungary	2019	652	62.2	61.8	10.1	7.4	20.1	0.6	0.0	57.0	67.4
	2023	748	55.6	55.6	17.8	8.6	18.1	0.0	0.0	55.6	55.6
Israel	2019	536	54.0	53.4	14.4	9.4	21.7	1.1	0.0	51.9	56.4
	2023	723	48.4	47.9	17.6	11.2	22.2	0.7	0.5	48.5	48.4
Italy	2019	518	63.6	63.2	12.7	4.1	19.4	0.6	0.0	64.7	62.6
	2023	638	61.5	61.3	12.9	4.4	21.0	0.3	0.0	58.5	64.8
Korea, Rep. of	2019	552	59.5	59.5	22.7	4.8	13.1	0.0	0.0	60.4	58.5
	2023	358	62.0	61.8	18.5	6.0	13.5	0.0	0.3	59.2	64.8
Lithuania	2019	544	56.0	55.9	13.7	7.5	22.6	0.2	0.0	59.7	52.4
	2023	768	57.6	57.6	11.6	7.9	22.9	0.0	0.0	55.4	59.9
Malaysia	2019	1019	53.8	53.6	8.9	9.2	28.0	0.3	0.0	53.6	54.0
	2023	1230	45.3	45.2	12.6	10.9	31.2	0.1	0.0	46.1	44.4
Norway (9)	2019	654	51.4	50.1	20.7	6.7	20.0	2.2	0.3	48.0	54.9
	2023	887	48.5	47.6	21.4	9.8	19.2	1.2	0.7	48.2	49.0
Portugal	2019	488	64.9	64.6	13.3	2.9	18.7	0.5	0.0	64.8	65.1
	2023	756	56.1	56.0	16.9	5.0	22.0	0.1	0.0	55.7	56.4
Qatar	2019	559	50.8	50.2	12.5	7.7	28.4	0.6	0.7	49.5	52.2
	2023	600	47.5	47.2	15.2	5.9	31.1	0.3	0.3	46.6	48.3
Singapore	2019	702	73.3	72.9	7.5	3.6	15.5	0.4	0.1	75.3	71.3
	2023	401	75.9	75.9	7.6	3.8	12.6	0.0	0.0	75.7	76.2
Sweden	2019	574	54.3	53.0	25.6	5.5	13.6	1.6	0.7	52.1	56.4
	2023	692	55.3	54.0	24.1	6.1	13.6	1.1	1.1	54.9	55.6
United Arab Emirates	2019	3174	51.0	50.6	15.0	7.0	26.5	0.8	0.1	51.0	51.1
	2023	5322	51.8	51.5	14.9	6.7	26.2	0.4	0.2	50.1	53.5
United States	2019	1242	57.3	57.1	13.6	5.2	23.7	0.1	0.3	56.9	57.9
	2023	1153	56.0	55.6	15.8	5.2	22.7	0.2	0.5	55.3	56.7
International Avg. (20)	2019	15157	57.5	56.9	15.5	6.0	20.5	1.0	0.2	56.6	58.4
	2023	18709	56.4	56.0	16.2	6.3	20.8	0.5	0.2	55.3	57.6

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SE2_02 SE72460: Human activity that can cause algal blooms - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	42.9	42.6	18.3	9.1	29.2	0.8	0.0	41.3	44.4
	2023	2423	44.1	43.8	19.5	8.1	27.9	0.4	0.3	40.9	47.1
Dubai, UAE	2019	814	64.3	63.9	11.3	3.7	20.5	0.4	0.2	65.1	63.4
	2023	1161	67.3	67.3	9.2	5.3	18.2	0.1	0.0	67.4	67.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SE2_03 SE72000: Characteristics of organisms (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	46.5	38.6	26.3	31.8	3.2	0.2	45.7	47.3
	2023	631	47.1	39.5	23.8	33.9	2.6	0.1	45.8	48.4
Chinese Taipei	2019	704	65.9	21.1	25.8	52.9	0.1	0.1	67.7	64.2
	2023	475	62.3	24.6	26.1	49.3	0.0	0.0	66.9	57.8
England	2019	462	52.1	38.2	17.2	42.3	1.9	0.4	49.9	55.0
	2023	583	57.4	33.8	17.2	48.5	0.2	0.3	60.2	54.7
Finland	2019	704	51.4	35.3	25.8	38.0	0.6	0.3	58.2	45.3
	2023	806	39.0	48.5	24.0	26.7	0.4	0.5	40.9	37.0
France	2019	551	46.7	42.5	19.0	36.0	1.9	0.5	45.0	48.1
	2023	642	36.4	54.1	17.5	27.1	1.3	0.0	34.7	38.0
Georgia	2019	468	23.5	65.1	17.4	14.0	3.3	0.2	24.4	22.5
	2023	676	27.4	59.9	22.4	15.6	2.0	0.1	31.2	23.4
Hong Kong SAR	2019	472	44.0	48.2	14.3	36.3	1.0	0.2	43.6	44.4
	2023	620	54.1	38.0	15.2	46.2	0.4	0.3	51.8	56.5
Hungary	2019	652	72.1	17.3	20.7	61.3	0.7	0.0	70.8	73.5
	2023	748	62.0	27.5	20.7	51.6	0.1	0.0	63.7	60.3
Israel	2019	536	31.1	59.7	15.3	22.7	2.3	0.0	28.4	34.1
	2023	723	22.1	69.4	15.0	14.3	0.8	0.5	20.8	23.5
Italy	2019	518	59.8	29.9	19.8	49.4	0.9	0.0	58.1	61.4
	2023	638	55.4	34.2	20.8	44.9	0.1	0.0	56.3	54.3
Korea, Rep. of	2019	552	36.9	47.1	32.0	20.9	0.0	0.0	34.2	39.6
	2023	358	40.0	44.2	31.1	24.4	0.0	0.3	36.8	43.2
Lithuania	2019	544	57.6	32.1	20.3	47.2	0.3	0.0	63.0	52.2
	2023	768	54.4	34.7	21.6	43.4	0.3	0.0	58.1	50.6
Malaysia	2019	1019	35.1	54.5	20.7	24.8	0.0	0.0	36.9	33.1
	2023	1230	19.8	73.0	13.7	12.9	0.4	0.0	21.3	18.2
Norway (9)	2019	654	38.7	51.9	16.0	29.8	2.1	0.3	39.4	37.8
	2023	887	33.6	59.8	9.6	27.9	2.0	0.7	35.0	32.5
Portugal	2019	488	68.8	19.4	23.2	56.8	0.6	0.0	68.5	69.1
	2023	756	54.0	35.5	21.0	43.5	0.0	0.0	55.2	52.8
Qatar	2019	559	39.2	52.0	14.8	30.8	1.6	0.7	43.6	34.5
	2023	600	34.3	56.2	17.0	25.3	1.2	0.4	33.1	35.5
Singapore	2019	702	79.3	11.6	17.8	70.0	0.4	0.1	81.7	77.1
	2023	401	80.8	10.8	16.8	72.4	0.0	0.0	80.3	81.3
Sweden	2019	574	47.5	40.4	22.1	35.6	1.3	0.7	53.9	41.3
	2023	692	40.2	48.7	18.8	29.6	1.7	1.1	42.8	37.6
United Arab Emirates	2019	3174	40.2	51.0	15.8	31.7	1.4	0.1	44.0	36.7
	2023	5322	40.4	52.4	13.5	33.3	0.6	0.2	40.8	40.0
United States	2019	1242	64.8	26.9	15.8	56.0	1.0	0.3	66.1	63.5
	2023	1153	55.2	35.2	18.5	45.5	0.4	0.5	53.9	56.3
International Avg. (20)	2019	15156	50.1	39.1	20.0	39.4	1.2	0.2	51.1	49.0
	2023	18709	45.8	44.0	19.2	35.8	0.7	0.3	46.5	45.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SE2_03 SE72000: Characteristics of organisms (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	30.2	63.0	11.8	23.9	1.4	0.0	32.4	28.2
	2023	2423	30.4	63.5	10.7	24.6	0.9	0.4	30.5	30.2
Dubai, UAE	2019	814	57.8	32.4	18.7	47.8	0.9	0.2	58.4	57.1
	2023	1161	60.8	31.7	14.6	53.1	0.6	0.0	60.2	61.3

Science: Biology / Reasoning

B_SE2_05 SE72901: Snakes sharing physical and behavioral traits - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	47.1	24.1	45.3	10.9	15.9	3.4	0.4	48.6	45.7
	2023	631	48.5	18.5	47.0	18.3	13.2	2.5	0.6	51.3	46.0
Chinese Taipei	2019	704	62.3	7.7	61.9	19.5	10.2	0.5	0.3	61.9	62.8
	2023	475	63.7	10.3	63.7	13.4	12.7	0.0	0.0	67.4	60.0
England	2019	462	60.5	12.3	59.3	12.7	13.7	1.4	0.6	59.4	61.8
	2023	583	64.4	12.4	63.6	14.4	8.4	0.8	0.4	60.5	68.1
Finland	2019	704	54.3	10.7	53.6	18.2	16.1	0.9	0.4	56.6	52.3
	2023	806	52.5	12.7	52.0	20.4	13.8	0.5	0.6	51.4	53.8
France	2019	551	60.4	17.5	59.8	10.0	11.6	0.5	0.5	62.1	58.9
	2023	642	59.2	14.4	58.7	11.9	14.2	0.8	0.0	61.0	57.3
Georgia	2019	467	40.8	28.5	38.9	15.4	12.5	4.1	0.6	39.9	41.7
	2023	676	40.0	26.1	38.9	19.3	13.0	1.7	1.0	40.1	39.9
Hong Kong SAR	2019	472	55.2	10.2	54.3	23.8	10.1	1.2	0.4	57.0	53.5
	2023	620	58.2	9.4	57.8	22.5	9.6	0.4	0.3	57.8	58.6
Hungary	2019	652	55.0	20.2	54.6	12.5	12.0	0.7	0.0	54.9	55.0
	2023	748	61.9	13.8	61.7	11.4	12.7	0.4	0.0	64.8	58.8
Israel	2019	536	38.0	16.0	37.3	25.6	19.2	1.9	0.0	37.3	38.8
	2023	723	34.4	19.6	33.8	22.3	22.5	1.3	0.6	35.4	33.3
Italy	2019	518	55.0	14.3	54.4	12.6	17.6	1.1	0.0	53.4	56.5
	2023	638	52.0	14.4	51.9	16.0	17.4	0.3	0.0	50.5	53.7
Korea, Rep. of	2019	552	45.5	12.0	45.2	27.9	14.3	0.6	0.0	49.8	41.2
	2023	358	50.0	7.7	49.9	26.9	15.3	0.0	0.3	52.0	47.9
Lithuania	2019	544	54.8	13.0	54.8	17.7	14.4	0.0	0.0	58.5	51.2
	2023	768	58.8	9.3	58.8	16.9	15.0	0.0	0.0	59.4	58.2
Malaysia	2019	1019	53.6	11.0	53.1	21.0	14.0	0.9	0.0	57.1	49.6
	2023	1230	52.3	13.7	52.1	21.4	12.4	0.0	0.4	56.5	47.7
Norway (9)	2019	654	53.7	19.2	51.7	13.3	12.1	3.5	0.3	56.1	51.2
	2023	887	55.4	17.7	53.6	15.6	9.9	2.1	1.2	54.5	56.3
Portugal	2019	488	56.3	15.2	55.8	17.1	11.0	0.8	0.0	55.6	57.1
	2023	756	51.6	14.9	51.4	21.3	12.0	0.4	0.0	51.2	52.0
Qatar	2019	559	44.5	22.4	43.6	17.7	14.1	1.5	0.7	46.8	42.3
	2023	600	50.6	20.8	49.9	14.4	13.6	0.9	0.4	53.1	48.2
Singapore	2019	702	66.8	8.9	66.6	9.8	14.4	0.3	0.1	66.9	66.8
	2023	401	68.0	8.0	68.0	8.6	15.5	0.0	0.0	70.3	65.8
Sweden	2019	574	55.7	12.0	54.1	21.6	9.4	2.1	0.7	57.3	54.1
	2023	692	57.6	11.4	56.3	19.2	10.8	1.2	1.1	63.2	52.1
United Arab Emirates	2019	3173	52.8	17.8	52.2	16.5	12.4	1.0	0.1	54.4	51.4
	2023	5322	52.9	16.5	52.3	18.8	11.4	0.7	0.4	54.1	51.7
United States	2019	1242	61.0	12.8	60.5	14.7	11.1	0.4	0.5	62.1	60.0
	2023	1153	59.6	11.6	58.8	17.5	10.8	0.6	0.8	59.6	59.6
International Avg. (20)	2019	15154	53.7	15.3	52.8	16.9	13.3	1.3	0.3	54.8	52.6
	2023	18709	54.6	14.1	54.0	17.5	13.2	0.7	0.4	55.7	53.5

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Reasoning
B_SE2_05 SE72901: Snakes sharing physical and behavioral traits - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	47.5	19.6	46.8	20.3	11.8	1.5	0.0	49.9	45.4
	2023	2423	49.5	19.3	48.9	21.1	9.6	0.7	0.5	49.5	49.5
Dubai, UAE	2019	814	59.1	11.5	58.4	13.4	15.6	0.8	0.3	58.9	59.2
	2023	1161	60.3	10.5	59.7	15.7	13.2	0.8	0.2	59.0	61.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SE2_06 SE72038: What makes fermentation unique - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	45.3	43.8	14.1	27.3	11.6	2.5	0.7	47.1	43.4
	2023	631	37.2	36.2	16.5	27.8	16.7	2.1	0.7	34.3	39.9
Chinese Taipei	2019	704	49.1	48.8	21.6	12.1	16.8	0.4	0.3	47.7	50.5
	2023	475	49.5	49.5	23.0	12.6	15.0	0.0	0.0	52.4	46.6
England	2019	462	55.6	53.6	15.2	15.8	11.8	3.0	0.6	54.5	57.1
	2023	583	57.9	57.5	13.2	14.7	13.9	0.3	0.4	57.3	58.5
Finland	2019	704	51.2	50.8	11.8	20.2	16.3	0.3	0.4	52.6	50.0
	2023	806	47.7	47.1	13.3	23.1	15.2	0.7	0.6	45.5	50.1
France	2019	551	41.6	40.3	17.8	25.5	13.3	2.5	0.5	41.7	41.5
	2023	642	40.3	39.6	16.3	27.4	15.0	1.7	0.0	40.4	40.1
Georgia	2019	467	30.0	28.6	23.3	23.8	19.5	4.2	0.6	34.1	26.1
	2023	676	33.2	32.1	30.4	17.7	16.4	2.4	1.0	34.0	32.4
Hong Kong SAR	2019	472	41.6	40.8	19.4	21.9	16.1	1.4	0.4	41.3	41.9
	2023	620	50.4	50.1	16.2	19.1	14.0	0.2	0.4	51.6	49.1
Hungary	2019	652	43.4	43.1	16.0	15.7	24.5	0.7	0.0	37.7	49.1
	2023	748	39.1	38.9	18.1	19.7	22.9	0.3	0.0	38.7	39.5
Israel	2019	536	55.6	54.3	11.9	20.0	11.5	2.3	0.0	55.3	55.8
	2023	723	50.3	49.7	13.0	22.0	14.0	0.7	0.6	51.6	49.0
Italy	2019	518	46.1	45.4	12.6	27.0	13.4	1.6	0.0	47.2	45.2
	2023	638	42.4	42.3	13.0	29.7	14.8	0.3	0.0	41.7	43.2
Korea, Rep. of	2019	552	47.7	47.6	17.1	16.1	19.1	0.2	0.0	47.6	47.7
	2023	358	48.2	47.9	17.4	13.0	21.1	0.4	0.3	45.1	51.2
Lithuania	2019	544	50.7	50.6	10.2	27.8	11.1	0.3	0.0	48.3	53.2
	2023	768	46.3	46.3	11.8	27.7	14.3	0.0	0.0	44.8	47.8
Malaysia	2019	1019	45.2	44.8	15.0	23.9	15.5	0.7	0.0	45.0	45.4
	2023	1230	35.3	35.1	24.4	25.7	14.2	0.1	0.4	35.1	35.5
Norway (9)	2019	654	53.5	49.7	13.4	19.8	10.1	6.6	0.5	51.7	55.5
	2023	887	45.6	44.1	16.3	20.4	15.9	2.0	1.3	46.0	45.3
Portugal	2019	488	49.9	49.1	12.4	22.5	14.5	1.6	0.0	48.7	51.1
	2023	756	39.6	39.5	16.9	26.6	16.8	0.2	0.0	39.4	39.8
Qatar	2019	559	45.6	44.7	12.9	22.9	17.4	1.3	0.7	48.5	42.7
	2023	600	48.1	47.8	13.7	21.8	16.2	0.2	0.4	46.7	49.4
Singapore	2019	702	66.9	66.5	9.4	11.1	12.4	0.5	0.1	66.8	67.1
	2023	401	61.7	61.7	9.8	11.2	17.2	0.0	0.0	61.2	62.3
Sweden	2019	574	39.2	38.1	18.2	26.7	14.1	2.0	1.0	43.6	34.9
	2023	692	37.1	35.7	18.3	25.4	16.7	2.8	1.1	40.4	33.9
United Arab Emirates	2019	3176	46.9	46.3	15.3	20.9	16.3	1.1	0.1	49.8	44.2
	2023	5322	51.7	51.0	15.3	19.3	13.1	0.8	0.6	52.6	50.8
United States	2019	1242	57.9	57.2	9.8	20.5	11.4	0.6	0.5	58.7	57.0
	2023	1153	53.9	52.9	12.8	22.2	10.2	1.1	0.8	55.8	52.2
International Avg. (20)	2019	15157	48.1	47.2	14.9	21.1	14.8	1.7	0.3	48.4	48.0
	2023	18709	45.8	45.2	16.5	21.4	15.7	0.8	0.4	45.7	45.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SE2_06 SE72038: What makes fermentation unique - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	38.6	38.2	18.2	26.0	16.4	1.2	0.0	41.6	36.0
	2023	2423	45.8	45.0	17.7	22.4	13.2	1.0	0.7	45.6	46.0
Dubai, UAE	2019	814	60.6	60.0	9.4	15.6	14.0	0.6	0.4	61.3	59.9
	2023	1161	65.1	64.4	9.7	13.7	11.1	0.9	0.2	63.7	66.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Knowing
B_SE2_07 SE72120: Identify a chemical property - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	53.4	5.5	52.2	16.9	23.1	1.7	0.7	49.4	57.3
	2023	631	57.2	5.7	56.5	12.0	24.5	0.6	0.7	52.6	61.5
Chinese Taipei	2019	704	70.7	8.7	70.4	12.1	8.4	0.2	0.3	67.8	73.6
	2023	475	73.0	5.8	73.0	10.8	10.3	0.0	0.0	73.4	72.6
England	2019	462	67.7	4.7	66.8	15.1	12.1	0.8	0.6	68.4	66.8
	2023	583	78.2	2.5	77.8	9.6	9.6	0.1	0.4	76.1	80.3
Finland	2019	704	53.7	2.5	53.3	11.9	31.6	0.3	0.4	53.3	54.0
	2023	806	55.5	4.7	55.1	13.3	26.0	0.2	0.6	53.9	57.3
France	2019	551	35.9	5.8	35.5	16.1	41.5	0.6	0.5	29.4	41.6
	2023	642	32.1	6.2	31.9	17.7	43.4	0.8	0.0	31.9	32.4
Georgia	2019	468	42.1	2.4	41.3	31.8	22.4	1.5	0.6	45.3	39.1
	2023	676	40.9	4.0	40.1	31.5	22.4	1.0	1.0	38.3	43.6
Hong Kong SAR	2019	472	45.1	10.5	44.5	17.0	26.6	1.1	0.4	45.2	45.1
	2023	620	50.4	8.0	50.2	15.4	26.0	0.0	0.4	50.1	50.7
Hungary	2019	652	71.5	2.5	71.0	6.7	19.1	0.7	0.0	72.4	70.7
	2023	748	65.4	2.6	65.4	7.2	24.9	0.0	0.0	65.0	65.8
Israel	2019	536	49.6	12.6	49.3	19.5	18.0	0.5	0.0	53.6	45.0
	2023	723	46.1	16.0	45.7	19.9	17.7	0.1	0.6	48.9	43.0
Italy	2019	518	44.1	3.2	43.4	26.8	24.9	1.7	0.0	51.9	37.4
	2023	638	44.0	3.7	43.9	20.2	32.0	0.3	0.0	49.8	37.8
Korea, Rep. of	2019	552	47.8	4.2	47.7	9.9	38.0	0.2	0.0	46.7	48.9
	2023	358	43.4	5.3	43.3	14.8	36.4	0.0	0.3	42.9	43.9
Lithuania	2019	544	45.0	10.8	44.9	27.2	16.8	0.2	0.0	40.2	49.9
	2023	768	60.9	5.5	60.7	21.3	12.2	0.2	0.0	59.9	61.9
Malaysia	2019	1019	22.6	25.6	22.5	29.3	22.3	0.3	0.0	19.8	25.7
	2023	1230	25.7	22.0	25.5	21.2	30.8	0.0	0.4	23.1	28.4
Norway (9)	2019	654	35.3	6.2	34.4	31.5	25.4	1.9	0.5	30.9	39.9
	2023	887	41.8	4.2	40.7	34.5	17.9	1.3	1.4	36.3	46.8
Portugal	2019	488	25.2	3.5	25.2	32.5	38.7	0.1	0.0	19.7	31.5
	2023	756	29.5	4.8	29.4	30.3	35.2	0.2	0.0	24.0	34.7
Qatar	2019	559	42.0	13.4	41.1	21.1	22.3	1.3	0.7	45.3	38.5
	2023	600	44.0	4.5	43.7	29.4	21.7	0.4	0.4	42.5	45.4
Singapore	2019	702	70.9	8.6	70.6	6.5	13.9	0.3	0.1	73.1	68.8
	2023	401	75.0	6.3	74.8	8.4	10.3	0.3	0.0	72.7	77.2
Sweden	2019	574	41.9	4.1	40.7	22.5	29.9	1.8	1.0	39.1	44.6
	2023	692	41.4	3.0	40.4	20.0	34.2	1.1	1.4	38.6	44.1
United Arab Emirates	2019	3177	55.2	9.2	54.7	25.3	9.9	0.8	0.1	56.6	53.9
	2023	5322	64.9	9.2	64.2	16.6	9.0	0.2	0.7	63.8	65.9
United States	2019	1242	56.5	4.6	56.0	23.1	15.4	0.3	0.6	55.7	57.4
	2023	1153	59.3	6.6	58.6	16.9	16.8	0.2	0.9	59.0	59.5
International Avg. (20)	2019	15159	48.8	7.4	48.3	20.1	23.0	0.8	0.3	48.2	49.5
	2023	18709	51.4	6.5	51.0	18.5	23.1	0.3	0.5	50.1	52.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Knowing
B_SE2_07 SE72120: Identify a chemical property - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	42.4	12.2	42.1	32.3	12.8	0.6	0.0	40.2	44.2
	2023	2423	55.5	12.2	54.8	20.3	11.5	0.4	0.8	53.5	57.4
Dubai, UAE	2019	814	72.9	5.5	72.2	15.1	6.2	0.6	0.4	74.7	71.0
	2023	1161	79.8	5.2	79.2	8.2	6.6	0.2	0.7	76.2	83.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SE2_08 SE72143: Equipment Tom should use (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	13.5	82.4	12.9	4.0	0.7	15.2	11.9
	2023	631	11.3	83.7	10.7	4.9	0.7	10.9	11.7
Chinese Taipei	2019	704	53.9	45.7	53.5	0.5	0.3	51.7	56.1
	2023	475	49.1	50.9	49.1	0.0	0.0	50.7	47.6
England	2019	462	31.6	67.0	30.9	1.5	0.6	31.6	31.6
	2023	583	34.3	65.0	33.9	0.7	0.4	33.1	35.4
Finland	2019	704	55.1	44.0	54.0	1.6	0.4	58.7	51.9
	2023	806	38.6	60.4	38.1	0.9	0.6	38.5	38.8
France	2019	551	24.1	74.5	23.6	1.3	0.5	23.2	24.9
	2023	642	23.7	75.2	23.4	1.3	0.0	24.2	23.3
Georgia	2019	469	25.0	69.6	23.2	6.6	0.6	28.4	21.6
	2023	676	21.4	72.3	19.7	6.2	1.9	21.3	21.5
Hong Kong SAR	2019	472	34.9	64.0	34.2	1.4	0.4	34.9	34.8
	2023	620	38.6	60.9	38.3	0.4	0.4	34.4	42.8
Hungary	2019	652	41.2	58.4	40.9	0.7	0.0	40.9	41.6
	2023	748	35.4	64.6	35.3	0.1	0.0	31.8	39.2
Israel	2019	536	30.9	68.3	30.6	1.2	0.0	30.4	31.5
	2023	723	24.9	73.9	24.5	0.8	0.7	28.6	20.9
Italy	2019	518	24.6	73.4	23.9	2.7	0.0	22.7	26.2
	2023	638	18.4	81.1	18.3	0.5	0.0	19.8	17.0
Korea, Rep. of	2019	552	57.1	42.9	57.1	0.0	0.0	59.3	54.9
	2023	358	56.5	43.3	56.2	0.3	0.3	60.2	52.7
Lithuania	2019	544	49.2	50.5	48.9	0.6	0.0	53.5	44.9
	2023	768	41.3	58.4	41.0	0.5	0.0	40.4	42.2
Malaysia	2019	1019	25.0	74.8	24.9	0.3	0.0	22.4	27.9
	2023	1230	11.8	87.8	11.7	0.1	0.4	12.6	10.8
Norway (9)	2019	654	33.0	63.0	30.9	5.6	0.5	28.7	37.1
	2023	887	22.8	73.4	21.6	3.3	1.6	21.3	24.1
Portugal	2019	488	33.7	65.9	33.6	0.5	0.0	29.5	38.5
	2023	756	23.5	76.4	23.5	0.2	0.0	24.6	22.5
Qatar	2019	559	36.7	61.2	35.5	2.6	0.7	44.0	29.1
	2023	600	32.3	66.8	31.9	1.0	0.4	33.1	31.6
Singapore	2019	702	54.4	45.4	54.2	0.4	0.1	52.7	56.1
	2023	401	55.0	45.0	55.0	0.0	0.0	59.3	51.0
Sweden	2019	574	37.3	60.1	35.7	3.2	1.0	39.9	34.7
	2023	692	33.3	64.3	32.0	2.2	1.4	33.9	32.6
United Arab Emirates	2019	3173	33.3	65.8	32.8	1.1	0.3	36.6	30.2
	2023	5322	31.4	67.6	31.0	0.6	0.8	33.0	29.9
United States	2019	1242	23.4	74.9	22.8	1.7	0.6	21.1	25.8
	2023	1153	19.7	79.1	19.5	0.5	0.9	17.5	21.8
International Avg. (20)	2019	15156	35.9	62.6	35.2	1.9	0.3	36.3	35.6
	2023	18709	31.2	67.5	30.7	1.2	0.5	31.5	30.9

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Science: Chemistry / Reasoning

B_SE2_08 SE72143: Equipment Tom should use (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	23.8	75.3	23.5	1.1	0.2	26.9	21.0
	2023	2423	22.7	75.9	22.4	0.9	0.9	23.3	22.2
Dubai, UAE	2019	814	46.0	53.0	45.2	1.3	0.5	48.1	43.8
	2023	1161	44.1	55.3	43.6	0.4	0.7	44.1	44.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Science: Chemistry / Applying
B_SE2_09 SE72523: Higher sugar concentration in tea - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	44.0	27.5	53.0	16.0	2.9	0.7	45.7	42.4
	2023	631	46.0	40.5	21.1	33.0	4.2	1.2	51.2	41.2
Chinese Taipei	2019	704	54.4	26.9	36.7	35.6	0.5	0.3	58.0	50.7
	2023	475	59.9	24.0	32.1	43.9	0.0	0.0	70.8	49.3
England	2019	462	43.2	32.9	45.5	19.5	1.6	0.6	43.9	42.2
	2023	582	49.4	29.1	42.5	27.9	0.1	0.4	51.2	47.6
Finland	2019	704	61.0	17.7	41.6	39.4	0.7	0.5	66.1	56.5
	2023	806	55.4	23.7	40.6	34.3	0.7	0.8	55.7	55.1
France	2019	551	50.9	27.1	41.1	28.9	2.0	0.8	51.5	50.4
	2023	642	41.9	38.7	37.4	22.6	1.2	0.1	45.8	37.7
Georgia	2019	470	31.3	45.7	41.1	9.7	2.9	0.6	36.7	26.1
	2023	676	26.7	53.4	33.6	8.8	2.2	2.1	31.0	22.3
Hong Kong SAR	2019	472	49.5	37.9	23.9	36.9	0.7	0.6	51.6	47.6
	2023	620	53.6	29.2	33.8	36.3	0.3	0.4	56.9	50.2
Hungary	2019	652	53.8	26.3	38.8	33.8	1.1	0.0	53.6	54.0
	2023	748	43.9	36.6	38.1	24.4	0.9	0.0	42.8	45.1
Israel	2019	536	51.0	32.9	30.8	34.8	1.5	0.0	51.9	50.0
	2023	723	46.3	33.6	37.1	26.4	2.2	0.7	50.6	41.7
Italy	2019	518	45.4	25.6	56.3	16.5	1.5	0.1	47.3	43.7
	2023	638	45.4	33.8	41.1	24.6	0.5	0.0	49.0	41.5
Korea, Rep. of	2019	552	69.5	17.8	25.1	56.7	0.3	0.0	76.7	62.3
	2023	358	50.7	38.7	20.2	40.2	0.7	0.3	57.3	44.2
Lithuania	2019	544	44.7	34.4	41.0	23.9	0.7	0.0	49.9	39.5
	2023	768	45.5	32.0	44.3	23.1	0.6	0.0	48.9	42.0
Malaysia	2019	1019	24.3	58.5	34.3	7.1	0.1	0.0	24.3	24.2
	2023	1230	14.2	73.6	23.3	2.5	0.1	0.6	14.8	13.5
Norway (9)	2019	654	48.0	36.1	27.7	32.3	3.1	0.9	46.5	49.6
	2023	887	49.6	36.5	24.6	35.7	1.3	1.9	52.7	46.9
Portugal	2019	488	52.8	25.0	43.2	30.5	1.4	0.0	55.1	50.1
	2023	756	45.4	32.3	43.7	23.2	0.8	0.1	47.9	43.0
Qatar	2019	559	51.1	47.6	1.0	49.9	0.8	0.7	61.9	40.1
	2023	600	30.8	41.0	54.2	3.2	1.2	0.4	33.0	28.8
Singapore	2019	702	60.8	22.8	32.4	44.4	0.3	0.1	66.1	55.7
	2023	401	60.1	19.7	40.5	39.8	0.0	0.0	59.3	60.9
Sweden	2019	574	54.5	28.8	30.5	37.5	2.0	1.2	53.8	55.1
	2023	692	53.0	31.4	28.1	37.2	1.7	1.5	58.2	47.9
United Arab Emirates	2019	3176	34.7	44.8	39.2	14.6	1.2	0.3	38.8	30.9
	2023	5322	34.7	48.9	30.8	18.7	0.7	1.0	37.5	31.9
United States	2019	1242	47.8	36.6	29.3	32.3	1.2	0.6	49.7	45.9
	2023	1153	44.2	41.2	27.8	29.8	0.3	1.0	46.9	41.8
International Avg. (20)	2019	15160	48.6	32.6	35.6	30.0	1.3	0.4	51.5	45.9
	2023	18708	44.8	36.9	34.7	26.8	1.0	0.6	48.1	41.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Applying
B_SE2_09 SE72523: Higher sugar concentration in tea - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	28.0	56.1	30.2	12.7	0.8	0.3	34.7	22.2
	2023	2423	29.0	56.6	25.9	15.4	0.9	1.2	31.7	26.4
Dubai, UAE	2019	814	47.0	28.5	47.6	22.6	0.7	0.5	48.4	45.5
	2023	1161	47.6	34.2	35.1	29.5	0.3	0.8	49.5	45.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Science: Chemistry / Knowing
B_SE2_10 SE72168: Formation of iron sulfide - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	34.5	41.3	10.6	11.5	33.3	2.4	0.9	35.5	33.5
	2023	631	33.3	37.4	11.8	15.0	32.0	2.4	1.4	32.5	34.0
Chinese Taipei	2019	704	59.5	18.3	14.1	7.7	59.1	0.4	0.3	57.9	61.1
	2023	475	59.3	16.1	18.2	6.3	59.1	0.3	0.0	61.8	56.9
England	2019	462	51.3	28.6	11.0	7.6	49.7	2.3	0.7	49.3	53.7
	2023	583	51.4	26.1	8.4	13.7	51.1	0.3	0.4	50.7	52.1
Finland	2019	704	64.4	16.4	14.6	4.2	63.4	0.9	0.5	67.6	61.5
	2023	806	60.0	18.9	13.0	7.4	59.0	0.9	0.8	61.3	58.7
France	2019	551	42.7	27.4	14.0	14.1	41.3	2.4	0.8	42.7	42.6
	2023	642	41.3	32.9	12.2	12.2	40.4	2.1	0.1	41.3	41.4
Georgia	2019	470	35.9	35.7	13.6	11.9	34.3	3.9	0.6	39.8	32.2
	2023	676	44.9	28.5	10.0	13.9	42.6	2.9	2.1	54.1	35.4
Hong Kong SAR	2019	472	26.7	34.6	16.8	20.7	26.3	1.0	0.6	27.7	25.8
	2023	620	35.1	30.3	16.9	17.3	35.0	0.1	0.4	31.1	39.3
Hungary	2019	652	50.3	24.5	18.7	6.0	49.7	1.1	0.0	50.4	50.1
	2023	748	48.5	22.3	19.7	9.4	48.4	0.3	0.0	49.4	47.5
Israel	2019	536	58.6	21.6	10.8	8.6	58.1	0.8	0.0	59.6	57.4
	2023	723	51.1	25.3	11.4	11.3	50.2	0.9	1.0	53.9	48.2
Italy	2019	518	41.3	24.0	10.7	22.2	40.0	3.0	0.1	45.2	38.0
	2023	638	38.4	22.2	18.7	19.8	37.9	1.2	0.1	38.7	38.1
Korea, Rep. of	2019	552	61.1	18.7	9.2	10.9	61.1	0.0	0.0	65.3	56.9
	2023	358	59.3	20.3	7.5	12.7	58.9	0.4	0.3	61.6	56.9
Lithuania	2019	544	54.5	23.6	12.2	9.5	54.3	0.3	0.0	58.2	50.8
	2023	768	56.0	20.7	11.6	11.6	55.8	0.3	0.0	57.1	54.8
Malaysia	2019	1019	33.5	37.5	12.7	16.2	33.4	0.2	0.0	36.1	30.6
	2023	1230	25.5	40.3	15.4	18.1	25.2	0.3	0.7	27.4	23.4
Norway (9)	2019	654	53.5	21.8	12.2	10.3	51.0	3.6	1.0	54.4	52.5
	2023	887	46.6	21.0	17.6	12.9	44.9	1.8	1.9	50.0	43.7
Portugal	2019	488	44.2	31.3	8.6	15.7	44.0	0.3	0.0	40.2	48.7
	2023	756	33.4	32.9	11.6	22.0	33.3	0.1	0.1	32.2	34.5
Qatar	2019	559	41.2	31.4	16.0	10.9	40.7	0.4	0.7	50.0	32.1
	2023	600	41.0	34.2	11.3	13.0	40.7	0.3	0.6	40.6	41.4
Singapore	2019	702	68.3	16.6	8.1	6.7	67.8	0.6	0.1	71.0	65.7
	2023	401	72.0	11.7	10.7	5.6	72.0	0.0	0.0	74.6	69.6
Sweden	2019	574	57.7	17.7	12.0	10.8	55.3	3.0	1.3	61.4	54.1
	2023	692	52.3	18.2	13.3	14.1	50.1	2.7	1.5	55.2	49.6
United Arab Emirates	2019	3175	43.8	28.3	14.7	12.3	43.0	1.4	0.3	49.0	39.0
	2023	5322	45.5	27.2	11.0	15.2	44.6	0.8	1.2	49.3	41.8
United States	2019	1242	48.6	28.1	10.2	12.3	47.9	0.9	0.7	48.3	48.9
	2023	1153	46.4	28.2	9.4	15.3	45.9	0.2	1.0	45.9	46.9
International Avg. (20)	2019	15159	48.6	26.4	12.5	11.5	47.7	1.4	0.4	50.5	46.8
	2023	18709	47.1	25.7	13.0	13.3	46.4	0.9	0.7	48.4	45.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Knowing

B_SE2_10 SE72168: Formation of iron sulfide - MC - Key: D

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	34.7	30.8	17.3	16.4	34.2	1.1	0.3	39.2	30.7
	2023	2423	35.6	31.0	13.5	18.7	35.0	0.5	1.3	39.0	32.5
Dubai, UAE	2019	814	60.8	22.6	8.3	7.9	59.9	0.8	0.5	64.8	56.4
	2023	1161	60.5	23.0	6.3	9.5	59.5	0.8	0.9	61.6	59.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Science: Physics / Knowing
B_SE2_11 SE72205: Water molecules in a melting ice cube - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	42.7	18.8	25.8	41.6	11.2	1.6	1.0	43.8	41.6
	2023	631	45.4	17.4	23.9	44.7	12.4	0.3	1.4	44.5	46.3
Chinese Taipei	2019	704	36.2	28.9	29.7	35.9	4.6	0.6	0.3	34.8	37.7
	2023	475	36.8	30.7	29.3	36.8	3.2	0.0	0.0	34.4	39.1
England	2019	462	52.7	16.7	20.2	51.1	9.1	2.3	0.7	52.5	52.9
	2023	583	56.7	17.2	16.4	56.4	9.4	0.1	0.4	54.8	58.6
Finland	2019	704	61.7	14.0	16.6	61.2	7.3	0.3	0.5	58.8	64.3
	2023	806	58.3	15.6	18.6	57.7	7.0	0.3	0.8	52.9	64.2
France	2019	551	46.1	24.3	17.5	45.4	11.2	0.4	1.1	43.2	48.7
	2023	641	48.8	19.1	17.9	48.5	13.8	0.5	0.2	48.6	49.1
Georgia	2019	468	36.2	37.2	18.5	35.7	7.3	0.8	0.6	38.6	33.9
	2023	676	46.6	24.2	20.2	45.1	7.3	0.5	2.6	47.2	45.9
Hong Kong SAR	2019	472	46.3	18.3	20.4	45.6	14.1	1.0	0.6	51.7	41.5
	2023	620	52.5	17.2	17.8	52.3	12.3	0.0	0.4	52.0	53.1
Hungary	2019	652	46.4	30.5	16.0	46.2	6.9	0.4	0.0	44.5	48.3
	2023	748	44.9	26.9	16.4	44.9	11.9	0.0	0.0	44.2	45.6
Israel	2019	536	68.3	9.1	8.2	67.7	14.1	0.9	0.0	68.1	68.6
	2023	723	58.8	10.6	14.1	58.0	15.9	0.2	1.2	61.3	56.1
Italy	2019	518	48.0	20.7	16.2	47.5	14.6	0.9	0.1	49.5	46.6
	2023	638	48.7	21.7	14.8	48.5	14.6	0.0	0.4	50.5	46.7
Korea, Rep. of	2019	552	60.4	16.3	15.1	60.0	7.9	0.7	0.0	58.5	62.4
	2023	358	59.4	12.2	17.3	59.2	11.0	0.0	0.3	61.1	57.7
Lithuania	2019	544	52.5	22.1	12.7	52.4	12.7	0.1	0.0	57.2	47.7
	2023	768	51.2	21.9	14.1	51.2	12.7	0.0	0.0	54.5	47.9
Malaysia	2019	1019	42.4	25.4	19.1	42.2	12.8	0.4	0.0	44.2	40.4
	2023	1230	29.5	37.4	20.9	29.2	11.6	0.0	1.0	30.3	28.7
Norway (9)	2019	654	58.3	13.4	16.8	56.9	10.5	1.4	1.1	57.0	59.6
	2023	887	54.9	14.4	14.2	53.5	15.4	0.4	2.1	56.8	53.3
Portugal	2019	488	60.1	10.7	17.9	60.1	11.2	0.1	0.0	57.5	63.1
	2023	756	51.2	14.5	18.4	51.1	15.8	0.1	0.1	52.5	50.0
Qatar	2019	559	50.1	22.1	16.9	49.4	10.3	0.6	0.7	51.8	48.3
	2023	600	50.6	18.3	19.5	50.2	11.2	0.3	0.6	54.8	46.6
Singapore	2019	702	68.0	6.4	10.0	67.7	15.4	0.4	0.1	68.1	68.0
	2023	401	71.1	7.0	7.9	71.1	14.1	0.0	0.0	71.4	70.9
Sweden	2019	574	76.2	5.2	5.9	74.8	12.3	0.5	1.3	73.9	78.4
	2023	692	71.2	7.3	8.5	69.4	12.3	1.0	1.5	73.6	68.8
United Arab Emirates	2019	3175	49.6	22.2	14.1	49.0	13.6	0.8	0.4	50.4	48.9
	2023	5322	53.5	17.2	16.5	52.6	11.9	0.3	1.5	53.9	53.2
United States	2019	1242	60.2	11.0	14.4	59.3	13.9	0.5	0.9	61.2	59.1
	2023	1153	57.9	14.6	15.2	57.3	11.8	0.0	1.0	56.9	58.9
International Avg. (20)	2019	15157	53.1	18.7	16.6	52.5	11.0	0.7	0.5	53.3	53.0
	2023	18708	52.4	18.3	17.1	51.9	11.8	0.2	0.8	52.8	52.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Knowing

B_SE2_11 SE72205: Water molecules in a melting ice cube - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	44.1	21.6	16.5	43.6	17.3	0.7	0.4	43.9	44.3
	2023	2423	46.5	17.4	20.2	45.7	15.0	0.3	1.4	47.1	45.9
Dubai, UAE	2019	814	63.2	14.7	9.6	62.4	12.0	0.6	0.7	64.2	62.1
	2023	1161	66.8	13.5	11.2	65.8	7.9	0.4	1.2	66.6	67.1

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SE2_12 SE72293: Why Ben slides faster when the water is on - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	8.3	87.0	7.8	4.0	1.1	6.8	9.7
	2023	631	6.6	86.9	6.1	5.6	1.4	2.3	10.6
Chinese Taipei	2019	704	55.3	43.9	54.2	1.6	0.3	52.0	58.5
	2023	475	58.6	41.2	58.2	0.6	0.0	56.5	60.5
England	2019	462	44.1	52.6	41.5	5.2	0.7	40.7	48.6
	2023	582	45.0	53.8	44.0	1.8	0.4	39.9	50.0
Finland	2019	704	43.3	54.5	41.6	3.4	0.5	33.5	51.7
	2023	806	36.5	62.0	35.6	1.6	0.8	29.0	44.6
France	2019	551	12.9	82.9	12.2	3.7	1.1	9.7	15.7
	2023	642	13.1	81.4	12.3	6.2	0.2	11.7	14.6
Georgia	2019	470	19.9	70.8	17.6	11.0	0.6	17.5	22.2
	2023	676	19.2	71.0	16.9	9.2	2.9	16.3	22.2
Hong Kong SAR	2019	472	52.9	45.0	50.4	4.0	0.6	50.6	54.9
	2023	620	59.6	38.6	57.1	3.9	0.4	57.7	61.6
Hungary	2019	652	26.9	72.0	26.5	1.6	0.0	20.7	33.1
	2023	747	21.9	76.0	21.3	2.7	0.0	17.9	26.2
Israel	2019	536	30.5	65.2	28.6	5.9	0.3	26.6	35.0
	2023	723	15.8	77.9	14.6	6.1	1.4	11.7	20.4
Italy	2019	518	17.3	79.5	16.6	3.6	0.3	10.9	22.8
	2023	638	18.1	78.8	17.4	3.4	0.4	14.7	21.8
Korea, Rep. of	2019	552	57.3	42.2	56.7	1.2	0.0	52.0	62.9
	2023	358	56.7	41.8	54.8	3.1	0.3	49.9	63.6
Lithuania	2019	544	35.4	61.2	33.5	5.3	0.0	29.4	41.6
	2023	768	28.1	68.6	26.8	4.6	0.0	21.4	35.0
Malaysia	2019	1019	23.6	75.5	23.4	1.1	0.1	18.3	29.6
	2023	1230	5.5	92.9	5.4	0.7	1.0	4.4	6.7
Norway (9)	2019	654	20.4	73.8	19.0	6.1	1.1	12.1	28.7
	2023	887	18.7	76.0	17.5	4.4	2.1	14.0	23.0
Portugal	2019	488	8.0	85.5	7.4	7.1	0.0	6.9	9.2
	2023	756	6.7	88.4	6.4	5.1	0.1	7.2	6.3
Qatar	2019	559	20.0	76.2	19.0	4.1	0.7	16.3	23.9
	2023	599	26.0	70.2	24.7	4.3	0.9	21.9	30.0
Singapore	2019	702	77.0	22.9	76.5	0.5	0.1	72.6	81.2
	2023	401	78.3	21.7	78.3	0.0	0.0	74.5	81.8
Sweden	2019	574	33.1	64.3	31.8	2.6	1.3	27.8	38.3
	2023	692	28.8	67.6	27.3	3.6	1.5	20.9	36.5
United Arab Emirates	2019	3178	28.5	68.3	27.2	4.0	0.4	24.4	32.3
	2023	5321	33.0	64.0	31.5	3.0	1.5	29.5	36.3
United States	2019	1242	36.7	61.3	35.6	2.2	0.9	30.8	43.3
	2023	1153	34.3	64.7	33.8	0.6	1.0	28.8	39.3
International Avg. (20)	2019	15162	32.6	64.2	31.4	3.9	0.5	28.0	37.2
	2023	18705	30.5	66.2	29.5	3.5	0.8	26.5	34.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying

B_SE2_12 SE72293: Why Ben Slides faster when the water is on - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	19.3	76.8	18.4	4.4	0.4	16.1	22.3
	2023	2423	23.8	72.3	22.6	3.7	1.4	21.8	25.8
Dubai, UAE	2019	814	45.1	53.3	43.8	2.3	0.7	39.8	51.0
	2023	1160	51.1	47.2	49.4	2.1	1.3	46.4	55.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

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Science: Physics / Reasoning

B_SE2_13A SE72280A: Movement of motorbike in chronophotograph A - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	11.7	84.0	11.1	3.3	1.5	11.0	12.3
	2023	631	16.1	79.8	15.4	3.4	1.4	13.5	18.6
Chinese Taipei	2019	704	30.6	69.1	30.5	0.2	0.3	30.0	31.2
	2023	475	35.8	64.2	35.8	0.0	0.0	41.4	30.4
England	2019	462	29.8	68.0	28.9	2.1	0.9	26.9	33.7
	2023	582	42.7	56.8	42.4	0.4	0.4	41.2	44.2
Finland	2019	704	48.0	51.1	47.2	1.0	0.7	49.4	46.8
	2023	806	42.9	56.4	42.4	0.4	0.8	44.5	41.3
France	2019	551	43.0	55.6	42.0	1.2	1.2	44.6	41.6
	2023	642	41.5	57.7	41.0	0.7	0.6	40.4	42.7
Georgia	2019	469	14.1	78.7	12.9	6.5	1.9	15.7	12.5
	2023	676	12.7	80.5	11.7	4.6	3.2	13.9	11.4
Hong Kong SAR	2019	472	26.7	72.6	26.4	0.4	0.6	27.9	25.5
	2023	620	34.1	65.6	33.9	0.0	0.4	30.8	37.4
Hungary	2019	652	33.3	66.4	33.2	0.5	0.0	30.5	36.2
	2023	748	35.4	64.2	35.3	0.5	0.0	33.7	37.4
Israel	2019	536	33.1	65.5	32.4	1.5	0.6	32.3	34.0
	2023	723	25.0	72.9	24.2	1.2	1.7	24.1	25.8
Italy	2019	518	24.2	73.9	23.6	1.9	0.6	20.9	27.1
	2023	638	30.6	68.5	30.2	0.7	0.5	31.4	29.7
Korea, Rep. of	2019	552	52.3	47.6	52.2	0.2	0.0	53.6	51.1
	2023	358	46.9	52.6	46.5	0.6	0.3	45.6	48.2
Lithuania	2019	544	28.3	71.0	28.1	0.9	0.0	29.1	27.5
	2023	768	30.1	69.8	30.1	0.1	0.0	26.9	33.3
Malaysia	2019	1019	17.3	82.2	17.2	0.5	0.1	15.5	19.3
	2023	1230	29.5	69.6	29.2	0.1	1.1	31.7	27.1
Norway (9)	2019	654	30.3	66.8	29.0	3.0	1.2	29.4	31.0
	2023	887	35.4	61.9	33.9	2.0	2.2	35.7	35.1
Portugal	2019	488	32.5	66.7	32.1	1.1	0.1	30.5	34.8
	2023	756	24.6	74.9	24.4	0.6	0.1	21.9	27.2
Qatar	2019	559	16.5	81.6	16.1	0.7	1.6	15.4	17.6
	2023	600	18.1	80.7	17.8	0.7	0.9	16.6	19.4
Singapore	2019	702	50.1	49.7	49.9	0.2	0.1	46.1	53.9
	2023	401	51.8	48.2	51.8	0.0	0.0	49.3	54.2
Sweden	2019	574	40.1	57.6	38.6	2.5	1.3	40.2	40.0
	2023	692	43.8	54.2	42.2	2.1	1.5	43.5	44.0
United Arab Emirates	2019	3175	18.6	80.1	18.3	1.1	0.6	20.3	17.0
	2023	5322	22.7	74.9	22.0	1.3	1.8	21.6	23.7
United States	2019	1242	36.4	61.9	35.4	1.7	1.0	37.5	35.2
	2023	1153	33.0	65.9	32.4	0.5	1.2	31.6	34.3
International Avg. (20)	2019	15158	30.8	67.5	30.3	1.5	0.7	30.3	31.4
	2023	18708	32.6	66.0	32.1	1.0	0.9	32.0	33.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Science: Physics / Reasoning

B_SE2_13A SE72280A: Movement of motorbike in chronophotograph A - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1170 2423	13.3 17.0	84.9 80.5	13.0 16.5	1.4 1.2	0.7 1.8	14.6 16.2	12.1 17.8
Dubai, UAE	2019 2023	814 1161	31.2 39.5	67.9 58.8	30.8 38.4	0.6 1.4	0.7 1.4	32.5 38.4	29.9 40.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Reasoning

B_SE2_13B SE72280B: Movement of motorbike in chronophotograph B - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	67.5	20.9	61.1	6.5	2.0	7.5	1.9	67.8	67.2
	2023	631	70.9	18.6	62.7	4.9	2.1	9.7	1.9	72.2	69.8
Chinese Taipei	2019	704	87.2	8.3	85.6	2.7	1.6	1.5	0.3	87.1	87.2
	2023	475	86.7	6.8	85.7	2.3	4.0	1.1	0.0	87.9	85.5
England	2019	462	83.0	10.3	78.1	3.5	2.2	5.0	0.9	84.8	80.6
	2023	583	91.4	4.7	82.9	2.5	0.6	8.9	0.4	90.2	92.8
Finland	2019	704	91.0	4.4	83.1	1.9	1.9	8.0	0.8	92.5	89.7
	2023	806	90.3	4.8	86.2	2.5	2.0	3.8	0.8	90.1	90.6
France	2019	551	85.3	8.6	80.5	2.7	2.6	4.2	1.4	85.6	85.0
	2023	642	86.6	6.0	81.3	4.2	2.4	5.4	0.7	85.9	87.4
Georgia	2019	470	65.6	19.4	55.2	7.0	2.5	14.0	1.9	64.9	66.2
	2023	676	73.3	14.5	60.0	5.1	2.2	14.7	3.5	76.7	69.6
Hong Kong SAR	2019	472	86.8	7.3	79.9	3.2	1.7	7.4	0.6	88.1	85.6
	2023	620	89.8	5.3	83.4	2.4	1.8	6.7	0.4	87.9	91.8
Hungary	2019	652	85.7	10.2	82.5	1.7	1.9	3.7	0.0	83.4	88.0
	2023	748	87.8	7.5	85.0	2.7	1.6	3.2	0.0	86.7	89.1
Israel	2019	536	85.0	7.9	77.9	2.9	2.9	7.6	0.8	84.0	86.1
	2023	723	82.2	9.2	75.0	4.5	2.6	6.9	1.8	82.5	81.8
Italy	2019	518	86.5	7.8	82.3	3.3	1.8	4.1	0.8	87.2	85.9
	2023	638	82.5	10.1	77.3	3.4	2.8	5.7	0.6	81.2	84.0
Korea, Rep. of	2019	552	93.8	3.4	93.4	2.1	0.6	0.5	0.0	96.4	91.2
	2023	358	92.0	5.8	90.3	1.2	0.8	1.6	0.3	90.7	93.4
Lithuania	2019	544	86.9	8.6	83.9	2.8	1.2	3.5	0.0	88.5	85.2
	2023	768	86.3	9.6	84.7	2.6	1.2	1.9	0.0	86.3	86.3
Malaysia	2019	1019	66.1	18.8	64.5	8.9	5.3	2.3	0.1	66.9	65.3
	2023	1230	61.9	21.0	59.1	7.8	7.6	3.3	1.2	63.2	60.4
Norway (9)	2019	654	85.4	5.4	72.1	4.6	2.4	14.2	1.4	84.4	86.4
	2023	887	83.1	8.6	72.3	3.9	2.2	10.7	2.3	83.3	83.0
Portugal	2019	488	83.0	9.1	78.1	4.8	2.2	5.7	0.1	83.4	82.5
	2023	756	80.8	11.7	77.1	3.2	3.4	4.5	0.1	80.0	81.6
Qatar	2019	559	73.3	17.2	67.3	3.8	3.6	6.5	1.6	77.4	68.8
	2023	600	78.2	13.3	71.7	4.2	2.5	7.4	0.9	77.1	79.4
Singapore	2019	702	93.7	3.9	92.1	1.1	1.1	1.6	0.1	93.8	93.6
	2023	401	92.3	5.0	91.7	0.5	2.1	0.6	0.0	93.0	91.6
Sweden	2019	574	87.5	8.0	78.7	2.6	0.6	8.7	1.4	90.1	85.0
	2023	692	87.6	7.2	79.4	3.2	0.8	7.4	1.9	88.2	86.9
United Arab Emirates	2019	3175	73.8	15.8	69.5	6.2	2.7	5.2	0.6	74.8	72.9
	2023	5322	77.2	13.5	66.5	4.2	1.9	11.7	2.2	79.2	75.2
United States	2019	1242	84.8	10.7	81.6	3.0	1.0	2.7	1.0	86.3	83.2
	2023	1153	84.1	9.9	79.6	3.6	1.5	4.1	1.3	84.8	83.6
International Avg. (20)	2019	15159	82.6	10.3	77.4	3.8	2.1	5.7	0.8	83.4	81.8
	2023	18709	83.3	9.7	77.6	3.4	2.3	6.0	1.0	83.3	83.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Science: Physics / Reasoning

B_SE2_13B SE72280B: Movement of motorbike in chronophotograph B - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1171	66.8	20.4	63.3	8.1	3.0	4.6	0.7	68.7	64.9
	2023	2423	73.3	15.9	63.3	5.0	2.2	11.6	2.1	77.1	69.6
Dubai, UAE	2019	814	86.6	8.0	82.0	3.7	1.0	4.7	0.7	86.7	86.5
	2023	1161	87.4	7.7	77.7	2.7	0.8	9.4	1.8	89.2	85.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Applying
B_SE2_14 SE72370: What makes Saturn visible - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	581	50.6	15.6	14.7	48.6	17.0	2.0	2.1	45.8	55.3
	2023	631	48.4	22.4	15.7	46.8	11.8	1.2	2.2	42.0	54.3
Chinese Taipei	2019	704	78.3	9.4	5.0	77.7	7.2	0.5	0.3	74.2	82.3
	2023	475	78.1	9.3	6.3	78.1	6.3	0.0	0.0	80.5	75.8
England	2019	462	62.4	14.1	7.9	61.3	15.0	0.8	0.9	57.9	68.4
	2023	583	64.1	12.3	10.4	63.8	12.9	0.1	0.4	58.4	69.6
Finland	2019	704	70.7	10.2	2.4	69.7	16.3	0.5	0.9	68.6	72.4
	2023	806	68.3	10.0	6.4	67.5	14.9	0.4	0.8	61.5	75.7
France	2019	551	53.3	20.8	11.7	52.2	13.4	0.6	1.4	49.4	56.7
	2023	642	49.9	23.4	13.6	48.8	12.0	1.0	1.2	45.5	54.3
Georgia	2019	469	53.7	15.6	17.5	51.2	11.1	2.6	2.0	52.1	55.3
	2023	676	48.4	24.0	12.4	45.8	12.5	1.4	3.9	49.8	47.0
Hong Kong SAR	2019	472	71.7	5.7	13.1	70.4	8.9	1.0	0.8	68.5	74.6
	2023	620	70.6	7.4	12.5	70.2	9.3	0.1	0.4	62.5	78.8
Hungary	2019	652	65.1	15.2	8.9	64.6	10.5	0.8	0.0	58.7	71.5
	2023	748	63.4	17.6	8.7	63.3	10.2	0.2	0.0	58.7	68.6
Israel	2019	536	53.7	17.9	12.9	53.2	15.0	0.2	0.8	48.7	59.4
	2023	723	47.7	22.2	15.2	46.4	13.6	0.8	1.8	44.1	51.4
Italy	2019	518	62.6	18.0	8.2	61.7	10.7	0.7	0.8	59.7	65.2
	2023	638	53.8	21.9	15.4	53.4	8.5	0.1	0.6	50.5	57.4
Korea, Rep. of	2019	552	80.9	13.1	1.7	80.9	4.2	0.0	0.0	77.0	85.0
	2023	358	78.7	13.6	4.1	78.5	3.5	0.0	0.3	80.4	77.1
Lithuania	2019	544	72.3	8.6	8.3	72.1	10.8	0.3	0.0	71.9	72.8
	2023	768	66.1	10.4	9.0	66.0	14.5	0.2	0.0	64.6	67.6
Malaysia	2019	1019	46.5	17.0	19.6	46.2	16.5	0.4	0.3	43.3	50.1
	2023	1230	42.7	16.9	22.8	42.0	16.7	0.2	1.4	42.3	43.2
Norway (9)	2019	654	69.5	10.3	8.2	67.1	11.0	2.1	1.4	67.2	71.8
	2023	887	61.0	14.6	10.9	59.0	12.3	0.5	2.6	53.8	67.6
Portugal	2019	488	67.1	14.6	9.0	66.2	8.8	1.2	0.1	62.7	72.1
	2023	756	53.8	21.5	15.5	53.6	9.0	0.3	0.1	51.8	55.8
Qatar	2019	559	52.7	18.1	14.6	51.5	13.4	0.6	1.7	51.3	54.1
	2023	600	51.0	17.5	15.5	50.0	15.0	0.2	1.7	47.0	54.8
Singapore	2019	702	80.2	5.3	3.7	79.7	10.7	0.6	0.1	76.1	84.2
	2023	401	84.7	4.8	5.1	84.7	5.4	0.0	0.0	81.9	87.3
Sweden	2019	574	75.2	7.5	6.7	73.7	10.1	0.6	1.4	71.1	79.2
	2023	692	72.2	7.6	10.6	70.0	8.7	1.1	2.0	71.4	73.1
United Arab Emirates	2019	3173	60.0	11.2	16.9	59.1	11.3	0.8	0.7	61.1	58.9
	2023	5322	60.4	12.2	16.6	58.4	9.6	0.6	2.7	59.6	61.1
United States	2019	1242	70.5	10.9	8.8	69.4	9.4	0.4	1.1	65.9	75.5
	2023	1153	62.1	13.8	13.9	60.8	9.5	0.6	1.4	56.6	67.0
International Avg. (20)	2019	15156	64.9	13.0	10.0	63.8	11.6	0.8	0.8	61.6	68.2
	2023	18709	61.3	15.2	12.0	60.4	10.8	0.4	1.2	58.1	64.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Applying
B_SE2_14 SE72370: What makes Saturn visible - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	51.4	11.0	23.4	50.6	13.4	0.8	0.7	52.9	50.0
	2023	2423	53.3	13.5	20.9	51.7	10.9	0.6	2.5	51.3	55.2
Dubai, UAE	2019	814	72.6	8.5	9.0	71.5	9.4	0.7	0.9	72.3	73.0
	2023	1161	72.4	9.3	10.4	70.7	7.3	0.5	1.9	71.8	73.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying

B_SE4_01A SE62091A: Producers in food web - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	72.9	3.3	72.1	9.2	14.3	1.1	0.0	68.9	76.5
	2023	646	66.8	4.5	64.4	12.5	14.9	3.2	0.5	60.8	71.9
Chinese Taipei	2019	698	93.1	1.8	92.9	1.6	3.5	0.2	0.0	91.8	94.3
	2023	475	90.4	2.1	89.7	3.6	3.8	0.8	0.0	88.3	92.2
England	2019	481	78.8	5.8	77.6	3.3	11.8	1.1	0.4	75.5	82.1
	2023	602	81.1	4.5	80.2	3.2	11.0	1.0	0.1	77.7	84.5
Finland	2019	703	90.8	4.5	90.2	2.4	2.2	0.3	0.4	94.3	87.9
	2023	804	83.9	5.8	83.4	5.2	5.0	0.3	0.2	84.7	83.1
France	2019	548	72.8	3.7	71.4	6.2	16.7	2.0	0.0	67.3	78.6
	2023	632	70.4	5.1	70.0	8.6	15.7	0.6	0.0	63.6	77.0
Georgia	2019	480	57.2	10.1	54.1	10.3	20.0	5.4	0.0	62.7	52.2
	2023	688	59.0	12.4	55.3	8.8	17.2	6.0	0.3	57.5	60.5
Hong Kong SAR	2019	470	87.4	3.7	86.7	3.1	5.8	0.4	0.4	87.7	87.1
	2023	623	89.7	2.2	87.6	2.1	5.7	1.9	0.5	87.1	92.6
Hungary	2019	648	88.0	3.3	87.4	2.2	6.4	0.7	0.0	84.8	91.0
	2023	765	87.4	3.7	87.0	3.9	4.9	0.5	0.0	86.4	88.4
Israel	2019	541	79.6	4.7	79.6	5.1	10.6	0.0	0.0	78.2	81.2
	2023	733	70.4	6.1	69.3	6.5	16.5	1.6	0.0	70.2	70.6
Italy	2019	528	69.6	4.6	68.5	6.5	18.7	1.5	0.2	70.1	69.2
	2023	645	70.8	2.8	69.7	7.3	18.7	1.5	0.0	66.4	75.2
Korea, Rep. of	2019	552	89.0	2.0	88.3	1.4	7.5	0.7	0.0	82.9	94.9
	2023	365	81.2	4.5	80.6	3.2	10.9	0.8	0.0	77.2	85.7
Lithuania	2019	546	89.6	3.6	89.4	3.1	3.7	0.1	0.0	90.5	88.7
	2023	758	85.9	5.6	85.3	3.9	4.5	0.7	0.0	86.6	85.2
Malaysia	2019	1012	86.0	4.0	86.0	2.0	8.0	0.0	0.0	88.7	83.2
	2023	1244	77.7	5.7	77.5	4.6	12.0	0.2	0.0	79.3	76.0
Norway (9)	2019	658	81.9	9.3	80.4	3.3	5.2	1.8	0.1	83.3	80.5
	2023	889	79.6	6.8	78.4	4.1	9.1	0.8	0.8	80.1	79.2
Portugal	2019	484	87.9	1.8	87.8	2.2	8.0	0.1	0.0	87.6	88.3
	2023	762	82.3	3.1	82.1	4.4	10.1	0.3	0.0	80.7	83.9
Qatar	2019	559	80.3	6.5	80.0	3.2	10.0	0.4	0.0	83.4	77.2
	2023	597	74.2	6.3	73.8	5.2	14.1	0.5	0.0	77.9	70.4
Singapore	2019	698	94.2	1.8	93.9	0.7	3.3	0.3	0.0	93.6	94.7
	2023	402	93.2	1.5	92.8	2.7	2.5	0.5	0.0	92.5	93.9
Sweden	2019	577	82.1	5.1	81.0	2.5	10.0	1.3	0.0	82.2	82.1
	2023	714	75.1	7.8	74.2	6.4	10.5	0.8	0.4	75.5	74.6
United Arab Emirates	2019	3197	72.9	7.8	72.3	5.7	13.4	0.7	0.0	74.5	71.5
	2023	5310	72.8	5.4	71.7	6.8	14.6	1.3	0.1	71.4	74.2
United States	2019	1260	83.6	4.2	83.2	4.0	8.1	0.3	0.2	83.0	84.3
	2023	1151	80.1	4.8	79.7	4.3	10.7	0.3	0.2	78.2	81.9
International Avg. (20)	2019	15222	81.9	4.6	81.1	3.9	9.4	0.9	0.1	81.6	82.3
	2023	18805	78.6	5.0	77.6	5.4	10.6	1.2	0.2	77.1	80.1

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SE4_01A SE62091A: Producers in food web - MC - Key: B

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	62.8	11.0	62.1	8.6	17.1	1.1	0.0	65.4	60.6
	2023	2424	65.2	6.7	64.2	8.1	19.5	1.3	0.2	62.4	68.0
Dubai, UAE	2019	821	87.5	2.9	87.1	1.6	8.0	0.4	0.0	85.2	89.8
	2023	1158	86.2	3.1	85.4	3.4	7.2	0.9	0.0	84.8	87.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SE4_01B SE62091B: Eat only plants in food web - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	77.8	7.5	12.9	72.6	0.2	6.6	0.1	84.4	71.9
	2023	646	72.6	7.5	18.1	70.6	1.1	2.3	0.5	69.0	75.5
Chinese Taipei	2019	698	86.0	9.4	3.4	80.1	0.3	6.8	0.0	85.9	86.0
	2023	475	84.9	10.2	4.1	84.6	0.7	0.4	0.0	81.9	87.6
England	2019	481	74.8	15.2	8.9	72.7	0.5	2.3	0.4	75.5	74.0
	2023	602	77.8	9.1	12.4	76.7	0.3	1.4	0.1	76.5	79.1
Finland	2019	703	70.9	8.8	18.5	68.1	0.7	3.5	0.4	73.4	68.8
	2023	804	67.4	9.6	21.6	66.6	0.9	1.0	0.2	68.3	66.6
France	2019	548	68.1	14.3	9.2	66.4	7.6	2.5	0.0	63.7	72.8
	2023	632	65.0	11.6	16.4	64.4	6.7	0.9	0.0	62.7	67.1
Georgia	2019	481	70.6	7.2	17.7	64.1	1.7	9.3	0.0	72.3	69.1
	2023	688	71.3	10.4	14.5	69.0	2.9	2.9	0.3	74.0	68.4
Hong Kong SAR	2019	470	80.3	11.6	4.7	75.1	2.2	6.1	0.4	82.3	78.5
	2023	623	75.3	13.3	7.0	74.6	4.1	0.6	0.5	74.6	76.2
Hungary	2019	648	81.8	8.0	9.1	80.7	0.8	1.4	0.0	80.1	83.4
	2023	765	77.4	9.5	12.5	77.0	0.6	0.5	0.0	73.7	80.9
Israel	2019	541	81.6	8.2	8.4	79.8	1.3	2.2	0.0	82.0	81.1
	2023	733	72.0	10.4	16.4	71.6	1.0	0.7	0.0	71.5	72.5
Italy	2019	528	78.6	9.4	10.6	76.1	0.7	3.1	0.2	79.7	77.5
	2023	645	74.9	9.2	14.5	74.3	1.2	0.8	0.0	74.3	75.4
Korea, Rep. of	2019	552	77.8	13.7	7.1	77.4	1.2	0.5	0.0	77.3	78.3
	2023	365	80.8	10.2	8.3	80.8	0.7	0.1	0.0	82.3	79.2
Lithuania	2019	546	83.2	8.4	7.4	80.8	0.5	3.0	0.0	86.0	80.4
	2023	758	80.0	9.9	9.2	79.9	0.9	0.2	0.0	79.1	81.0
Malaysia	2019	1012	79.4	10.9	6.2	76.7	2.8	3.4	0.0	78.6	80.2
	2023	1244	70.5	16.2	10.2	70.3	3.1	0.3	0.0	71.8	69.0
Norway (9)	2019	658	81.5	7.3	8.8	73.9	0.7	9.3	0.1	78.8	84.5
	2023	889	75.8	12.2	11.2	74.4	0.4	1.1	0.8	74.4	77.0
Portugal	2019	484	86.5	9.6	3.4	83.9	0.0	3.0	0.0	86.6	86.4
	2023	762	80.2	10.7	7.9	79.7	1.2	0.5	0.0	78.2	82.0
Qatar	2019	559	78.7	7.5	10.2	67.6	0.6	14.2	0.0	80.5	76.8
	2023	597	76.2	6.1	15.8	74.9	1.5	1.7	0.0	76.8	75.5
Singapore	2019	698	92.6	3.4	3.0	89.1	0.7	3.8	0.0	93.7	91.5
	2023	402	85.6	7.6	6.7	85.4	0.0	0.2	0.0	87.5	83.9
Sweden	2019	577	81.2	7.4	8.8	74.8	1.1	7.8	0.0	79.6	82.9
	2023	714	70.4	13.3	14.3	69.9	1.8	0.4	0.4	74.0	66.5
United Arab Emirates	2019	3197	74.5	10.0	10.7	66.4	2.1	10.8	0.0	77.1	72.0
	2023	5310	75.7	9.6	12.3	75.0	2.2	0.7	0.1	76.1	75.3
United States	2019	1260	84.2	4.9	6.0	60.2	0.3	28.2	0.3	86.5	81.9
	2023	1151	80.2	8.1	10.5	79.8	1.1	0.2	0.2	79.3	81.0
International Avg. (20)	2019	15223	79.5	9.1	8.8	74.3	1.3	6.4	0.1	80.2	78.9
	2023	18805	75.7	10.2	12.2	75.0	1.6	0.8	0.2	75.3	76.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SE4_01B SE62091B: Eat only plants in food web - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	67.8	12.6	12.7	61.1	3.6	10.0	0.0	73.4	62.2
	2023	2424	73.0	11.1	12.7	72.2	2.9	0.9	0.2	74.5	71.6
Dubai, UAE	2019	821	86.5	6.1	5.4	77.0	0.5	10.9	0.0	84.6	88.4
	2023	1158	81.7	7.4	9.6	81.5	1.2	0.3	0.0	82.3	81.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Applying
B_SE4_02 SE62100: Cell structure of fossils - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	27.1	67.4	25.0	7.5	0.1	30.0	24.4
	2023	646	26.7	68.9	25.1	5.5	0.5	31.5	23.0
Chinese Taipei	2019	698	79.0	21.0	78.8	0.2	0.0	78.8	79.1
	2023	475	74.0	26.0	74.0	0.0	0.0	71.3	76.4
England	2019	481	46.9	52.0	46.0	1.7	0.4	44.3	49.5
	2023	602	59.2	40.1	58.2	1.6	0.1	60.3	58.3
Finland	2019	703	47.0	52.5	46.5	0.4	0.7	55.6	39.8
	2023	804	46.9	52.7	46.6	0.4	0.2	51.0	42.8
France	2019	548	16.2	78.0	15.1	6.8	0.0	16.8	15.7
	2023	632	21.4	77.1	20.9	2.0	0.0	20.9	21.8
Georgia	2019	481	28.5	67.4	26.8	5.7	0.0	34.2	23.2
	2023	688	28.8	68.5	27.7	3.6	0.3	30.2	27.3
Hong Kong SAR	2019	470	59.1	40.3	58.2	1.1	0.4	56.5	61.3
	2023	623	60.8	38.9	60.3	0.4	0.5	58.8	63.0
Hungary	2019	648	12.2	85.7	11.9	2.4	0.0	11.0	13.4
	2023	765	11.9	87.0	11.8	1.2	0.0	13.1	10.8
Israel	2019	541	39.7	58.2	38.3	3.5	0.0	43.0	36.0
	2023	732	27.6	71.0	27.1	1.9	0.0	27.3	27.9
Italy	2019	528	28.4	67.3	26.6	5.9	0.2	29.1	27.6
	2023	645	29.6	66.6	28.0	5.4	0.0	31.5	27.6
Korea, Rep. of	2019	552	57.2	42.7	57.1	0.2	0.0	55.9	58.5
	2023	365	64.3	35.6	64.1	0.3	0.0	67.8	60.4
Lithuania	2019	546	43.0	56.0	42.3	1.7	0.0	47.2	38.9
	2023	757	42.1	57.4	41.8	0.8	0.0	47.9	36.4
Malaysia	2019	1012	34.9	64.5	34.6	0.9	0.0	37.6	32.0
	2023	1245	30.9	69.0	30.8	0.1	0.0	34.1	27.6
Norway (9)	2019	658	19.8	76.8	18.9	4.2	0.1	19.7	20.0
	2023	889	29.6	68.3	28.7	2.2	0.8	32.1	27.6
Portugal	2019	484	43.7	55.9	43.3	0.8	0.0	41.7	46.0
	2023	762	40.6	58.7	40.1	1.1	0.0	43.0	38.3
Qatar	2019	559	50.4	49.2	50.0	0.8	0.0	58.9	42.0
	2023	597	56.2	43.4	55.7	0.9	0.0	60.1	52.3
Singapore	2019	698	83.5	16.4	82.9	0.7	0.1	86.2	80.9
	2023	402	82.1	17.9	82.1	0.0	0.0	82.7	81.5
Sweden	2019	577	20.7	76.7	20.0	3.3	0.0	23.9	17.1
	2023	714	27.0	71.7	26.5	1.4	0.4	28.0	25.9
United Arab Emirates	2019	3196	54.6	44.7	53.9	1.4	0.0	62.1	48.1
	2023	5310	53.2	46.6	52.9	0.4	0.1	55.6	50.8
United States	2019	1260	54.5	45.0	53.9	0.8	0.3	53.0	56.1
	2023	1151	45.3	54.2	44.8	0.8	0.2	46.1	44.6
International Avg. (20)	2019	15222	42.3	55.9	41.5	2.5	0.1	44.3	40.5
	2023	18804	42.9	56.0	42.4	1.5	0.2	44.7	41.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Applying
B_SE4_02 SE62100: Cell structure of fossils - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1174	37.9	61.4	37.5	1.1	0.0	44.8	31.8
	2023	2424	41.5	58.2	41.2	0.4	0.2	44.1	38.9
Dubai, UAE	2019	821	74.0	25.6	72.9	1.5	0.0	79.5	68.6
	2023	1158	69.9	30.0	69.7	0.2	0.0	70.1	69.7

Science: Biology / Reasoning

B_SE4_03 SE62097: Kate's heart and breathing rates - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	53.6	51.3	16.4	25.4	2.5	4.0	0.4	56.9	50.6
	2023	646	56.2	54.2	16.5	22.7	3.0	3.2	0.5	52.4	59.4
Chinese Taipei	2019	698	74.3	73.6	11.6	11.5	2.4	0.9	0.0	73.8	74.7
	2023	475	77.9	77.9	10.2	10.0	1.9	0.0	0.0	78.9	77.1
England	2019	481	59.8	57.9	17.0	16.6	5.3	2.8	0.4	60.0	59.7
	2023	602	60.0	59.0	14.1	21.4	3.9	1.4	0.1	62.5	57.5
Finland	2019	703	62.5	61.0	17.6	14.5	4.4	1.7	0.7	66.0	59.6
	2023	804	63.3	62.5	21.6	10.3	4.3	1.0	0.2	66.2	60.4
France	2019	548	53.7	53.0	21.1	20.0	4.6	1.3	0.0	53.6	53.8
	2023	632	59.4	58.6	19.6	16.3	4.1	1.4	0.0	59.2	59.7
Georgia	2019	480	36.2	33.5	38.5	15.5	5.2	7.4	0.0	38.7	33.9
	2023	688	42.3	40.4	31.0	18.3	6.0	4.0	0.3	44.4	40.1
Hong Kong SAR	2019	470	68.1	67.3	15.4	12.1	4.0	0.6	0.6	68.3	67.9
	2023	623	66.2	65.7	19.0	11.4	3.2	0.3	0.5	64.8	67.8
Hungary	2019	648	62.0	62.0	19.5	12.2	6.2	0.1	0.0	56.1	67.8
	2023	765	56.9	56.6	23.0	16.2	3.8	0.5	0.0	57.8	56.1
Israel	2019	541	60.7	60.1	19.2	14.9	4.9	0.9	0.0	58.9	62.6
	2023	732	54.0	53.3	23.4	16.1	5.8	1.4	0.0	55.9	52.2
Italy	2019	528	57.7	56.6	17.5	20.0	3.9	1.8	0.2	60.3	55.1
	2023	645	60.0	58.4	17.6	17.4	3.8	2.7	0.0	61.2	58.8
Korea, Rep. of	2019	552	62.1	61.7	17.7	17.5	2.4	0.7	0.0	65.9	58.4
	2023	365	74.6	74.4	11.3	12.4	1.6	0.3	0.0	80.0	68.6
Lithuania	2019	546	67.0	66.5	14.8	15.6	2.4	0.7	0.0	66.5	67.4
	2023	758	63.6	63.5	21.0	12.3	3.0	0.3	0.0	62.8	64.5
Malaysia	2019	1012	52.5	52.3	22.1	21.9	3.3	0.3	0.1	52.4	52.6
	2023	1244	47.3	47.3	22.4	25.3	5.0	0.0	0.0	46.8	47.8
Norway (9)	2019	658	60.2	57.6	20.0	15.3	2.8	4.3	0.1	61.6	58.8
	2023	889	59.6	58.2	19.5	14.5	5.3	1.7	0.8	64.4	55.8
Portugal	2019	484	50.3	49.3	24.8	20.9	3.1	2.0	0.0	47.4	53.8
	2023	762	53.2	52.7	23.0	18.2	5.1	0.9	0.0	54.4	52.1
Qatar	2019	559	48.7	48.0	22.4	24.2	3.9	1.5	0.0	51.0	46.5
	2023	597	55.7	55.4	18.6	20.4	5.1	0.3	0.2	52.4	58.9
Singapore	2019	698	81.6	81.2	5.9	10.2	2.2	0.3	0.1	85.2	78.0
	2023	402	81.3	81.3	9.7	7.0	1.9	0.0	0.0	78.2	84.0
Sweden	2019	577	64.2	63.2	17.4	11.1	6.8	1.4	0.2	66.3	61.8
	2023	714	69.0	67.7	15.1	10.9	4.4	1.4	0.4	68.3	69.8
United Arab Emirates	2019	3191	48.8	47.9	20.6	24.2	5.3	2.0	0.0	49.0	48.7
	2023	5310	55.3	54.9	19.2	21.4	3.7	0.6	0.1	55.7	54.9
United States	2019	1260	60.5	60.0	16.3	18.8	4.2	0.5	0.3	63.2	58.0
	2023	1151	59.6	59.2	16.5	19.6	4.1	0.4	0.2	59.7	59.7
International Avg. (20)	2019	15216	59.2	58.2	18.8	17.1	4.0	1.8	0.1	60.1	58.5
	2023	18804	60.8	60.1	18.6	16.1	4.0	1.1	0.2	61.3	60.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Reasoning
B_SE4_03 SE62097: Kate's heart and breathing rates - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	42.7	41.8	22.1	28.6	5.6	1.9	0.0	44.7	40.7
	2023	2424	49.3	48.9	22.4	23.3	4.6	0.6	0.2	50.0	48.7
Dubai, UAE	2019	821	63.4	62.2	14.9	16.5	4.5	1.9	0.0	63.3	63.5
	2023	1158	67.2	67.0	13.5	16.1	3.1	0.3	0.0	65.6	68.7

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Biology / Knowing
B_SE4_04 SE62101: Stomach tissue and function (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	49.8	29.6	35.4	29.2	5.1	0.7	46.4	52.8
	2023	646	47.2	29.9	40.2	24.6	4.8	0.5	44.1	49.8
Chinese Taipei	2019	698	77.1	7.4	30.7	61.1	0.8	0.0	71.8	82.3
	2023	475	74.8	9.3	31.9	58.9	0.0	0.0	73.7	75.7
England	2019	481	61.7	17.7	38.0	40.1	3.7	0.4	59.9	63.6
	2023	602	64.1	17.6	36.1	45.6	0.6	0.1	62.1	66.1
Finland	2019	703	52.1	22.7	48.6	26.7	1.4	0.7	51.6	52.5
	2023	804	49.2	26.2	48.0	24.6	1.0	0.2	49.6	48.9
France	2019	548	48.9	27.3	44.1	25.1	3.2	0.2	47.0	50.9
	2023	632	46.1	31.1	45.2	23.4	0.3	0.0	43.1	49.1
Georgia	2019	480	61.8	18.8	27.2	39.0	15.0	0.0	62.6	61.1
	2023	688	59.6	24.5	28.7	42.9	3.6	0.3	59.8	59.3
Hong Kong SAR	2019	470	58.0	23.3	35.8	38.9	1.4	0.6	57.1	58.7
	2023	622	64.3	18.6	32.5	46.4	2.1	0.5	59.3	69.9
Hungary	2019	648	57.3	22.3	40.2	36.8	0.7	0.0	53.7	60.8
	2023	765	53.6	24.5	43.5	31.8	0.2	0.0	51.3	55.9
Israel	2019	541	51.1	31.2	33.4	33.4	2.0	0.0	49.5	52.9
	2023	732	43.0	37.4	37.8	23.5	1.0	0.2	41.3	44.6
Italy	2019	528	54.1	23.6	40.6	31.5	4.0	0.4	54.4	53.8
	2023	645	54.2	24.8	41.1	33.2	1.0	0.0	51.0	57.6
Korea, Rep. of	2019	552	74.9	13.0	23.9	62.3	0.8	0.0	73.5	76.2
	2023	365	68.4	17.5	27.7	54.1	0.6	0.0	68.0	69.0
Lithuania	2019	546	59.5	22.2	35.7	41.0	1.1	0.0	53.4	65.8
	2023	758	54.8	27.4	35.6	37.0	0.4	0.0	52.7	56.8
Malaysia	2019	1012	34.0	47.4	36.1	15.7	0.6	0.1	34.2	33.8
	2023	1244	29.6	52.0	36.2	11.4	0.4	0.0	27.4	32.0
Norway (9)	2019	658	57.8	24.9	28.9	39.6	6.2	0.4	56.7	58.9
	2023	889	51.0	31.0	33.4	33.0	1.8	0.8	49.0	52.7
Portugal	2019	484	45.2	34.6	39.8	25.1	0.5	0.0	42.4	48.6
	2023	762	46.2	35.1	37.4	27.4	0.1	0.0	42.3	49.8
Qatar	2019	559	50.8	27.8	37.4	29.4	5.4	0.0	50.9	50.8
	2023	597	48.1	34.2	34.4	30.5	0.7	0.2	48.0	48.3
Singapore	2019	698	75.9	8.4	31.0	59.7	0.8	0.1	74.9	76.9
	2023	402	70.5	11.4	36.1	52.2	0.3	0.0	72.0	69.1
Sweden	2019	577	46.7	36.1	29.5	29.7	4.4	0.3	46.1	47.3
	2023	714	42.1	38.9	35.8	23.4	1.4	0.4	42.1	42.1
United Arab Emirates	2019	3192	48.7	33.6	32.5	31.1	2.8	0.0	48.4	49.0
	2023	5310	50.2	31.5	36.0	31.9	0.5	0.1	48.9	51.6
United States	2019	1260	58.0	22.1	38.8	37.9	0.9	0.3	55.6	60.3
	2023	1151	54.6	25.1	40.1	34.3	0.4	0.2	53.5	55.6
International Avg. (20)	2019	15217	56.2	24.7	35.4	36.7	3.0	0.2	54.5	57.9
	2023	18803	53.6	27.4	36.9	34.5	1.0	0.2	52.0	55.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Biology / Knowing

B_SE4_04 SE62101: Stomach tissue and function (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	41.7	41.0	31.2	24.9	2.9	0.0	43.1	40.3
	2023	2424	42.4	39.2	36.0	24.1	0.5	0.2	41.6	43.2
Dubai, UAE	2019	821	64.1	18.1	34.5	45.8	1.6	0.0	61.6	66.6
	2023	1158	64.4	17.6	35.9	46.3	0.3	0.0	61.9	66.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SE4_06 SE62128: Densities of three liquids - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	32.3	62.9	30.0	6.3	0.8	29.4	35.0
	2023	646	37.5	56.0	33.5	9.9	0.6	34.5	39.9
Chinese Taipei	2019	698	59.9	40.0	59.8	0.2	0.0	58.6	61.1
	2023	475	63.0	36.8	62.7	0.5	0.0	56.3	69.0
England	2019	481	51.7	44.8	48.0	6.8	0.4	50.2	53.4
	2023	601	55.9	42.2	53.5	4.1	0.1	49.9	61.6
Finland	2019	703	66.4	32.4	64.0	3.0	0.7	69.8	63.5
	2023	804	62.2	36.0	59.3	4.5	0.2	60.5	63.9
France	2019	548	52.6	44.4	49.3	6.0	0.2	49.8	55.7
	2023	632	55.0	42.2	51.5	6.3	0.0	53.2	56.7
Georgia	2019	481	44.0	46.3	36.5	17.1	0.1	38.7	49.2
	2023	688	43.9	49.4	38.7	11.6	0.3	38.1	50.0
Hong Kong SAR	2019	470	67.9	30.8	65.3	3.1	0.8	66.7	69.1
	2023	623	60.2	37.6	56.8	5.1	0.5	55.2	66.2
Hungary	2019	648	63.1	35.5	60.6	4.0	0.0	58.7	67.2
	2023	765	57.4	41.9	56.5	1.7	0.0	54.1	60.5
Israel	2019	541	59.5	38.7	57.0	4.2	0.0	58.9	60.3
	2023	732	51.9	45.5	49.1	5.3	0.2	53.8	50.1
Italy	2019	528	55.2	42.8	52.8	4.0	0.4	50.7	59.8
	2023	645	54.6	42.7	51.4	5.9	0.0	50.0	59.3
Korea, Rep. of	2019	552	75.0	24.4	73.4	2.2	0.0	74.3	75.8
	2023	365	76.9	22.5	74.6	3.0	0.0	78.7	74.8
Lithuania	2019	546	66.6	32.3	64.4	3.3	0.0	66.9	66.3
	2023	758	62.1	36.8	60.4	2.8	0.0	62.0	62.3
Malaysia	2019	1012	55.1	44.4	54.5	1.0	0.1	52.5	57.9
	2023	1245	43.0	57.0	43.0	0.1	0.0	43.6	42.4
Norway (9)	2019	658	54.6	41.0	49.2	9.2	0.6	50.2	59.1
	2023	889	51.0	45.5	47.4	6.2	1.0	49.0	52.6
Portugal	2019	484	54.5	44.2	53.0	2.4	0.4	52.5	57.1
	2023	762	52.2	46.7	51.0	2.3	0.0	50.2	54.2
Qatar	2019	559	42.7	53.9	40.2	6.0	0.0	39.7	45.8
	2023	597	51.8	46.9	50.4	2.5	0.2	46.2	57.5
Singapore	2019	698	80.2	19.7	79.9	0.4	0.1	77.8	82.7
	2023	402	80.3	19.7	80.3	0.0	0.0	79.8	80.7
Sweden	2019	577	53.5	42.7	49.1	7.6	0.5	51.4	55.9
	2023	714	58.3	39.2	54.8	5.6	0.4	53.9	63.2
United Arab Emirates	2019	3198	47.9	49.8	45.8	4.2	0.2	46.0	49.7
	2023	5310	52.1	47.0	51.0	1.8	0.2	51.1	53.0
United States	2019	1260	56.7	42.3	55.5	1.8	0.5	55.0	58.5
	2023	1151	50.5	48.8	49.7	1.2	0.3	48.0	52.7
International Avg. (20)	2019	15224	57.0	40.7	54.4	4.6	0.3	54.9	59.1
	2023	18804	56.0	42.0	53.8	4.0	0.2	53.4	58.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SE4_06 SE62128: Densities of three liquids - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1175 2424	39.3 45.0	58.1 53.8	37.6 44.1	3.9 1.8	0.4 0.2	39.2 46.1	39.5 44.0
Dubai, UAE	2019 2023	821 1158	61.9 65.4	37.2 34.1	60.4 64.3	2.4 1.5	0.0 0.1	60.8 62.3	63.0 68.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Knowing
B_SE4_07 SE62047: Absorbed or reflected light (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	36.5	61.2	35.2	2.5	1.0	34.4	38.4
	2023	646	34.4	62.6	32.8	4.1	0.6	36.7	32.5
Chinese Taipei	2019	698	49.4	50.6	49.4	0.0	0.0	49.3	49.5
	2023	475	48.7	51.3	48.7	0.0	0.0	51.5	46.1
England	2019	481	52.5	46.3	51.2	1.9	0.6	48.9	56.3
	2023	602	48.2	50.9	47.2	1.7	0.2	44.7	51.5
Finland	2019	703	51.4	47.7	50.6	1.0	0.7	53.8	49.5
	2023	804	50.0	49.6	49.6	0.6	0.2	47.6	52.4
France	2019	548	52.7	46.0	51.3	2.3	0.4	52.4	53.0
	2023	632	53.1	46.3	52.5	1.2	0.0	54.7	51.6
Georgia	2019	479	42.0	56.3	40.7	2.1	0.8	48.2	36.3
	2023	688	32.3	66.4	31.7	1.6	0.3	34.1	30.5
Hong Kong SAR	2019	470	49.4	49.9	48.7	0.4	1.0	47.2	51.4
	2023	623	41.1	58.4	40.9	0.3	0.5	36.3	46.6
Hungary	2019	648	58.5	41.4	58.4	0.2	0.0	58.1	58.9
	2023	765	44.2	55.7	44.2	0.2	0.0	40.8	47.5
Israel	2019	541	54.6	44.7	53.8	1.1	0.4	51.8	57.9
	2023	732	43.2	56.3	42.7	0.8	0.2	42.1	44.1
Italy	2019	528	48.1	50.4	46.8	2.1	0.7	47.7	48.5
	2023	645	46.7	52.9	46.3	0.8	0.0	45.4	48.0
Korea, Rep. of	2019	552	55.2	44.7	55.1	0.2	0.0	56.5	54.0
	2023	365	48.2	51.6	48.0	0.4	0.0	49.7	46.4
Lithuania	2019	546	41.9	57.9	41.8	0.4	0.0	45.3	38.6
	2023	758	41.9	58.0	41.8	0.2	0.0	40.7	43.1
Malaysia	2019	1012	44.7	55.0	44.4	0.5	0.2	46.6	42.6
	2023	1244	37.0	63.0	37.0	0.0	0.0	41.1	32.8
Norway (9)	2019	658	41.1	55.3	38.6	4.6	1.5	40.1	42.1
	2023	889	37.7	61.0	36.9	0.9	1.2	35.9	39.2
Portugal	2019	484	47.1	52.0	46.4	1.2	0.4	50.8	42.6
	2023	762	41.3	58.3	40.9	0.8	0.0	47.6	35.3
Qatar	2019	559	39.7	59.3	39.0	1.5	0.2	39.0	40.5
	2023	597	41.3	58.5	41.2	0.1	0.2	41.2	41.5
Singapore	2019	698	68.5	31.3	68.3	0.3	0.1	67.7	69.3
	2023	402	57.0	42.9	56.9	0.2	0.0	61.2	53.4
Sweden	2019	577	45.7	53.1	44.6	1.1	1.2	46.3	44.9
	2023	714	45.9	53.5	45.4	0.6	0.5	46.5	45.3
United Arab Emirates	2019	3195	46.2	53.1	45.5	1.1	0.3	44.8	47.4
	2023	5310	47.0	52.7	46.8	0.4	0.2	47.3	46.8
United States	2019	1260	50.3	49.1	49.7	0.5	0.6	51.2	49.4
	2023	1151	47.0	52.7	46.7	0.3	0.4	45.1	48.6
International Avg. (20)	2019	15219	48.8	50.3	48.0	1.2	0.5	49.0	48.5
	2023	18804	44.3	55.1	43.9	0.7	0.2	44.5	44.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Knowing

B_SE4_07 SE62047: Absorbed or reflected light (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1172 2424	42.7 44.0	56.4 55.7	42.1 43.7	1.0 0.3	0.5 0.2	42.4 44.0	43.0 43.9
Dubai, UAE	2019 2023	821 1158	57.2 58.1	42.1 41.7	56.1 57.9	1.7 0.3	0.1 0.2	53.6 58.7	60.7 57.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Physics / Applying
B_SE4_08 SE62042: Parts of incandescent light bulb (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	39.8	58.0	38.3	2.2	1.4	32.6	46.3
	2023	646	35.8	62.6	34.9	1.9	0.6	32.7	38.4
Chinese Taipei	2019	698	45.0	55.0	45.0	0.0	0.0	37.1	52.8
	2023	475	42.6	57.4	42.6	0.0	0.0	37.7	47.0
England	2019	481	36.9	61.3	35.9	2.2	0.6	29.5	44.6
	2023	602	42.4	57.0	42.0	0.6	0.3	36.5	48.2
Finland	2019	703	40.2	59.0	39.7	0.7	0.7	36.8	43.1
	2023	804	36.3	62.9	35.8	1.0	0.2	29.1	43.6
France	2019	548	40.5	58.3	39.8	0.8	1.1	38.5	42.8
	2023	632	35.8	63.7	35.5	0.8	0.0	32.7	38.9
Georgia	2019	479	14.4	80.8	13.5	3.8	1.9	9.6	18.8
	2023	688	13.5	84.8	13.2	1.2	0.8	8.4	18.7
Hong Kong SAR	2019	470	42.4	56.1	41.3	1.5	1.0	40.0	44.5
	2023	623	44.8	54.8	44.4	0.3	0.5	39.1	51.2
Hungary	2019	648	33.5	66.3	33.4	0.3	0.0	27.0	39.9
	2023	765	31.7	68.2	31.6	0.2	0.0	25.0	38.0
Israel	2019	541	48.9	50.3	48.1	1.3	0.4	46.4	51.7
	2023	733	41.5	58.2	41.3	0.1	0.4	36.3	46.6
Italy	2019	528	53.1	45.7	51.7	1.6	0.9	45.6	60.5
	2023	645	51.4	48.4	51.2	0.4	0.0	46.1	56.8
Korea, Rep. of	2019	552	37.2	62.4	36.9	0.7	0.0	34.9	39.5
	2023	365	35.9	63.9	35.8	0.3	0.0	34.5	37.4
Lithuania	2019	546	45.9	53.8	45.6	0.5	0.0	33.7	58.1
	2023	758	42.9	57.0	42.8	0.2	0.0	34.5	51.2
Malaysia	2019	1012	14.9	84.2	14.7	0.6	0.5	14.1	15.8
	2023	1244	22.1	77.9	22.1	0.0	0.0	20.8	23.5
Norway (9)	2019	658	38.1	58.4	36.0	4.0	1.6	32.3	44.2
	2023	889	30.0	68.4	29.3	1.1	1.2	25.8	33.4
Portugal	2019	484	28.9	70.4	28.6	0.7	0.4	24.5	34.1
	2023	762	28.4	71.0	28.2	0.8	0.0	22.5	34.1
Qatar	2019	559	36.4	62.6	35.9	1.2	0.3	36.7	36.1
	2023	597	40.1	59.5	39.9	0.3	0.2	38.9	41.4
Singapore	2019	698	61.2	38.6	60.8	0.6	0.1	58.4	63.8
	2023	402	60.3	39.7	60.3	0.0	0.0	62.3	58.5
Sweden	2019	577	40.7	57.3	39.4	1.8	1.5	36.0	46.0
	2023	714	41.4	57.9	40.9	0.6	0.6	37.4	45.8
United Arab Emirates	2019	3192	36.0	62.9	35.4	1.3	0.5	34.1	37.7
	2023	5310	38.5	61.3	38.4	0.1	0.3	36.6	40.4
United States	2019	1260	41.3	58.2	40.9	0.2	0.7	40.0	42.5
	2023	1151	36.5	63.0	36.2	0.4	0.4	30.6	42.1
International Avg. (20)	2019	15216	38.8	60.0	38.0	1.3	0.7	34.4	43.1
	2023	18805	37.6	61.9	37.3	0.5	0.3	33.4	41.8

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Physics / Applying
B_SE4_08 SE62042: Parts of incandescent light bulb (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1170 2424	25.1 32.0	73.8 67.7	24.7 31.9	0.9 0.1	0.6 0.3	25.3 30.4	24.9 33.6
Dubai, UAE	2019 2023	821 1158	49.7 48.6	49.7 51.3	49.1 48.4	0.8 0.1	0.4 0.2	43.0 45.4	56.5 51.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Applying
B_SE4_09 SE62250: Paint prevents rust - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	21.6	59.2	16.3	22.6	1.9	17.5	24.9
	2023	646	19.7	64.7	15.9	18.8	0.6	23.2	17.1
England	2019	481	30.0	59.0	25.3	15.1	0.6	29.2	30.8
	2023	602	33.2	63.0	31.3	5.4	0.3	35.0	31.4
Finland	2019	703	37.1	56.0	33.0	10.4	0.7	42.4	32.7
	2023	804	32.0	64.0	30.1	5.6	0.2	35.4	28.5
France	2019	548	30.6	55.1	24.3	19.6	1.1	29.4	31.7
	2023	632	26.7	62.1	22.6	15.2	0.0	30.5	23.2
Georgia	2019	480	35.4	44.3	24.2	29.6	1.9	37.6	33.4
	2023	688	15.2	65.1	11.7	22.5	0.8	15.6	14.8
Hong Kong SAR	2019	470	23.1	62.2	18.6	18.0	1.2	20.5	25.1
	2023	623	24.1	64.1	20.3	15.1	0.5	21.9	26.7
Hungary	2019	648	20.1	72.0	18.1	9.9	0.0	19.5	20.7
	2023	765	24.9	70.6	23.4	6.0	0.0	26.0	23.9
Israel	2019	541	21.2	61.8	16.6	20.9	0.6	18.5	23.9
	2023	732	17.9	69.1	15.1	15.2	0.6	16.6	19.0
Italy	2019	528	20.3	64.3	16.4	18.3	1.0	22.3	18.3
	2023	645	23.1	61.9	18.6	19.5	0.0	28.3	18.0
Korea, Rep. of	2019	552	43.7	52.1	40.4	7.4	0.0	41.9	45.4
	2023	365	41.1	53.6	37.4	9.0	0.0	39.7	42.7
Lithuania	2019	546	39.2	52.6	33.9	13.6	0.0	38.7	39.7
	2023	758	38.0	55.4	33.9	10.7	0.0	39.8	36.2
Malaysia	2019	1012	37.0	60.0	35.2	4.2	0.5	36.4	37.6
	2023	1245	33.1	65.3	32.3	2.5	0.0	31.5	34.7
Norway (9)	2019	658	36.7	51.0	29.5	17.3	2.2	34.3	39.1
	2023	889	31.2	60.2	27.3	11.2	1.4	34.0	28.9
Portugal	2019	484	21.2	67.0	18.0	14.7	0.4	27.7	12.7
	2023	762	13.4	73.7	11.4	14.9	0.0	14.1	12.8
Qatar	2019	559	20.5	67.3	17.4	15.0	0.3	22.5	18.5
	2023	596	41.2	53.5	37.6	8.7	0.2	43.0	39.4
Singapore	2019	698	39.2	59.6	38.4	1.8	0.1	38.1	40.3
	2023	402	33.1	66.2	32.8	1.0	0.0	37.8	29.1
Sweden	2019	577	40.7	50.5	34.7	12.3	2.5	43.3	37.8
	2023	714	39.5	54.7	35.7	9.0	0.6	39.7	39.3
United Arab Emirates	2019	3197	26.0	64.1	22.5	12.8	0.6	27.8	24.3
	2023	5308	24.6	70.9	23.1	5.6	0.4	26.3	22.9
United States	2019	1260	34.0	63.9	32.9	2.3	0.8	36.5	31.6
	2023	1151	25.8	72.0	25.0	2.5	0.5	25.8	25.9
International Avg. (19)	2019	14524	30.4	59.1	26.1	14.0	0.9	30.7	29.9
	2023	18327	28.3	63.7	25.5	10.4	0.3	29.7	27.1
Abu Dhabi, UAE	2019	1175	16.3	70.9	13.8	14.6	0.7	19.6	13.2
	2023	2424	18.1	75.9	16.7	7.0	0.4	19.5	16.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Applying
B_SE4_09 SE62250: Paint prevents rust - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Dubai, UAE	2019	821	38.1	57.0	35.1	7.6	0.4	36.8	39.4
	2023	1157	33.4	64.1	32.2	3.5	0.2	34.4	32.5

Science: Chemistry / Knowing
B_SE4_10 SE62246: True of all neutral atoms - MC - Key: C

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	34.2	30.0	17.2	32.3	14.9	3.3	2.4	35.2	33.3
	2023	646	36.1	31.4	20.0	34.5	9.6	3.9	0.6	40.2	32.8
Chinese Taipei	2019	698	54.6	25.3	13.0	54.5	7.1	0.1	0.0	55.3	53.9
	2023	475	51.7	24.5	17.2	51.7	6.7	0.0	0.0	52.4	51.1
England	2019	481	47.3	26.5	14.6	45.9	10.1	2.4	0.6	48.7	45.8
	2023	602	45.8	27.7	14.8	45.2	11.0	1.0	0.3	44.9	46.7
Finland	2019	703	52.4	32.2	8.7	51.6	6.0	0.9	0.7	54.7	50.5
	2023	804	47.1	30.9	12.8	46.6	8.6	0.9	0.2	46.4	47.8
Georgia	2019	479	43.2	27.6	16.7	40.4	8.9	4.4	2.1	45.8	40.8
	2023	688	46.2	25.5	18.0	45.0	9.0	1.8	0.8	49.7	42.6
Hungary	2019	648	53.9	29.8	10.4	53.1	5.4	1.4	0.0	49.8	57.8
	2023	765	55.8	26.6	11.2	55.8	6.4	0.0	0.0	54.5	57.0
Israel	2019	541	55.4	24.4	10.1	54.2	9.3	1.2	0.8	55.3	55.4
	2023	732	46.7	29.2	14.6	45.9	8.7	1.0	0.6	42.5	50.6
Italy	2019	528	43.5	29.9	14.8	41.7	9.7	2.7	1.3	37.7	49.2
	2023	645	43.7	27.6	20.5	43.1	7.5	1.3	0.0	41.8	45.7
Korea, Rep. of	2019	552	48.0	21.7	18.8	47.8	11.3	0.4	0.0	51.6	44.4
	2023	365	48.8	19.9	22.8	48.8	8.5	0.0	0.0	53.0	44.0
Lithuania	2019	546	46.5	34.1	10.9	45.9	7.8	1.3	0.0	47.2	45.7
	2023	758	51.4	28.5	12.1	51.3	7.8	0.3	0.0	50.3	52.5
Malaysia	2019	1012	32.8	25.4	28.5	32.3	12.2	0.6	1.0	34.4	31.1
	2023	1244	28.4	25.7	31.1	28.3	14.7	0.1	0.1	28.6	28.2
Norway (9)	2019	658	46.3	31.2	12.3	44.0	7.5	2.8	2.2	43.3	49.4
	2023	889	39.6	32.5	15.7	38.6	10.8	1.0	1.4	42.0	37.6
Portugal	2019	484	47.1	24.9	15.6	46.6	11.8	0.8	0.4	47.7	46.3
	2023	762	45.0	23.3	17.1	44.8	14.4	0.4	0.0	46.9	43.2
Qatar	2019	559	34.9	36.4	16.2	34.1	10.9	1.5	0.9	38.3	31.6
	2023	597	48.4	31.1	13.2	48.3	7.1	0.1	0.2	53.8	43.1
Singapore	2019	698	68.0	18.5	9.2	67.4	4.1	0.8	0.1	68.3	67.6
	2023	402	62.4	19.7	11.5	62.2	6.3	0.2	0.0	60.4	64.0
Sweden	2019	577	42.2	30.0	14.5	40.1	10.6	1.9	3.0	40.7	43.8
	2023	714	38.7	32.8	17.7	37.8	9.2	1.8	0.6	38.1	39.4
United Arab Emirates	2019	3191	46.9	25.8	14.8	45.6	11.1	2.0	0.7	48.3	45.5
	2023	5310	48.0	26.4	16.4	47.7	8.8	0.3	0.4	48.0	48.1
United States	2019	1260	40.4	30.5	16.0	39.6	11.7	1.1	1.1	42.0	39.1
	2023	1151	36.2	28.8	21.2	35.8	13.1	0.4	0.7	35.8	36.4
International Avg. (18)	2019	14197	46.5	28.0	14.6	45.4	9.5	1.6	0.9	46.9	46.2
	2023	17549	45.5	27.3	17.1	45.1	9.3	0.8	0.3	46.1	45.0
Abu Dhabi, UAE	2019	1170	43.1	23.4	16.8	41.9	15.0	2.1	0.8	44.5	41.7
	2023	2424	44.6	24.1	19.6	44.3	11.3	0.2	0.5	42.7	46.6
Dubai, UAE	2019	821	57.2	24.8	10.8	56.2	6.5	1.3	0.4	58.0	56.3
	2023	1158	57.4	23.6	12.8	56.9	5.9	0.7	0.2	58.5	56.3

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Chemistry / Reasoning

B_SE4_11 SE62056: Mary has a light stick - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	21.8	70.0	19.6	7.5	2.9	20.5	23.0
	2023	646	32.0	62.7	29.4	7.2	0.7	34.3	30.1
Chinese Taipei	2019	698	61.4	38.4	61.1	0.5	0.0	58.9	63.9
	2023	473	63.2	36.8	63.2	0.0	0.0	63.9	62.6
England	2019	481	48.7	48.6	46.0	4.8	0.6	47.4	49.9
	2023	601	53.7	45.6	52.9	1.2	0.3	52.4	54.9
Finland	2019	703	52.3	46.9	51.5	0.9	0.7	56.0	49.3
	2023	804	56.6	43.0	55.9	0.9	0.2	61.5	51.6
France	2019	548	27.4	68.5	25.9	4.2	1.4	25.6	29.3
	2023	632	42.8	56.2	42.0	1.8	0.0	46.7	38.9
Georgia	2019	481	20.4	70.9	18.2	8.4	2.5	22.0	19.0
	2023	688	14.9	80.9	14.2	4.1	0.8	15.5	14.4
Hong Kong SAR	2019	470	49.7	49.2	48.5	1.1	1.2	52.2	47.5
	2023	623	37.6	61.6	37.1	0.8	0.5	37.1	38.1
Hungary	2019	648	32.8	66.9	32.6	0.5	0.0	29.6	35.8
	2023	765	30.3	69.7	30.3	0.0	0.0	30.3	30.3
Israel	2019	541	32.0	66.0	31.0	2.1	0.8	36.0	27.5
	2023	732	27.7	70.8	27.1	1.5	0.6	29.0	26.4
Italy	2019	528	34.0	62.3	32.1	4.3	1.3	39.5	28.5
	2023	645	34.2	64.4	33.5	2.1	0.0	35.8	32.7
Korea, Rep. of	2019	552	59.2	40.6	59.0	0.4	0.0	60.5	58.0
	2023	365	24.1	75.7	24.0	0.3	0.0	24.5	23.6
Lithuania	2019	546	53.2	46.4	52.8	0.8	0.0	51.7	54.8
	2023	758	53.2	46.6	53.0	0.5	0.0	59.4	47.1
Malaysia	2019	1012	28.4	70.3	27.8	0.7	1.2	29.4	27.3
	2023	1245	21.7	78.2	21.7	0.0	0.1	21.8	21.6
Norway (9)	2019	658	51.1	45.3	47.4	5.1	2.2	55.5	46.7
	2023	889	47.2	50.8	45.5	2.1	1.5	52.7	42.7
Portugal	2019	484	44.2	54.3	43.0	2.3	0.4	42.9	45.8
	2023	762	41.2	58.2	40.7	1.2	0.0	44.8	37.8
Qatar	2019	559	35.2	61.7	33.5	3.8	1.1	38.8	31.6
	2023	597	37.4	62.0	37.1	0.7	0.2	41.6	33.2
Singapore	2019	698	75.6	24.2	75.0	0.7	0.1	77.5	73.7
	2023	402	70.3	29.7	70.3	0.0	0.0	71.7	69.0
Sweden	2019	577	36.0	59.7	33.6	3.7	3.0	45.4	26.2
	2023	714	42.1	56.7	41.1	1.6	0.6	42.1	42.0
United Arab Emirates	2019	3197	38.0	59.7	36.6	3.0	0.7	40.5	35.8
	2023	5310	40.8	58.6	40.3	0.7	0.5	41.8	39.7
United States	2019	1260	56.2	43.1	55.3	0.5	1.1	60.1	52.6
	2023	1151	51.2	48.1	50.4	0.7	0.8	54.5	48.2
International Avg. (20)	2019	15223	42.9	54.7	41.5	2.8	1.1	44.5	41.3
	2023	18802	41.1	57.8	40.5	1.4	0.3	43.1	39.3

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Chemistry / Reasoning

B_SE4_11 SE62056: Mary has a light stick - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1175 2424	27.8 34.3	69.9 64.9	26.9 33.9	2.3 0.7	0.9 0.5	32.5 35.5	23.6 33.1
Dubai, UAE	2019 2023	821 1158	61.7 58.0	37.3 41.6	60.1 57.6	2.2 0.3	0.4 0.5	62.2 58.1	61.3 57.9

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing

B_SE4_12 SE62235: Negative effects of fertilizer - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	36.9	34.7	17.2	28.8	13.4	2.4	3.5	39.0	35.0
	2023	646	37.5	36.3	16.6	28.7	15.1	2.4	1.0	40.4	35.1
Chinese Taipei	2019	698	77.2	76.6	2.9	7.4	12.4	0.8	0.0	78.6	75.8
	2023	475	71.4	71.4	2.5	12.5	13.6	0.0	0.0	68.2	74.1
England	2019	481	30.5	29.4	13.2	36.1	17.7	3.0	0.6	28.6	32.5
	2023	602	26.6	26.3	11.6	44.8	15.9	1.0	0.4	27.6	25.7
Finland	2019	703	61.7	60.7	10.7	13.2	13.8	0.9	0.7	67.1	57.1
	2023	804	54.7	54.1	11.7	15.1	18.1	0.8	0.2	55.9	53.5
France	2019	548	42.7	40.9	8.7	28.0	18.3	1.8	2.4	39.7	45.8
	2023	632	37.9	37.5	12.3	31.5	17.8	0.8	0.1	34.8	40.9
Georgia	2019	480	39.2	37.3	10.9	24.7	22.2	2.4	2.5	39.3	39.0
	2023	688	33.2	32.4	12.2	30.7	22.5	1.5	0.8	34.0	32.3
Hong Kong SAR	2019	470	47.6	46.5	7.7	27.8	15.8	0.8	1.4	51.4	44.4
	2023	623	50.6	50.1	4.3	22.0	22.6	0.5	0.5	48.2	53.4
Hungary	2019	648	64.5	64.2	8.0	17.6	9.8	0.5	0.0	64.5	64.4
	2023	765	55.5	55.5	10.5	20.6	13.3	0.1	0.0	53.7	57.2
Israel	2019	541	46.2	45.4	9.4	22.5	21.0	0.9	0.8	45.7	46.8
	2023	733	38.4	38.1	11.9	25.7	23.5	0.1	0.7	38.1	38.7
Italy	2019	528	39.1	37.8	6.3	30.6	21.9	1.5	1.8	38.9	39.4
	2023	645	42.5	42.4	12.3	24.2	21.0	0.1	0.0	46.0	38.8
Korea, Rep. of	2019	552	59.6	59.4	8.8	18.3	13.3	0.2	0.0	58.6	60.5
	2023	365	48.0	48.0	10.0	21.3	20.7	0.0	0.0	47.5	48.6
Lithuania	2019	546	60.2	59.9	5.5	21.8	12.3	0.5	0.0	58.5	62.0
	2023	758	46.5	46.3	6.9	30.9	15.5	0.4	0.0	45.9	47.0
Malaysia	2019	1012	55.2	54.1	6.2	17.4	20.5	0.4	1.4	56.0	54.2
	2023	1244	45.7	45.6	11.7	21.4	21.1	0.1	0.1	46.0	45.3
Norway (9)	2019	658	39.9	37.4	12.4	23.5	20.5	4.1	2.2	44.3	35.5
	2023	889	30.9	29.9	18.7	21.9	26.4	1.7	1.6	34.1	28.2
Portugal	2019	484	53.2	52.1	6.5	18.2	21.2	1.4	0.6	53.7	52.6
	2023	762	53.5	53.5	11.2	18.3	17.0	0.1	0.0	51.9	55.0
Qatar	2019	559	38.3	37.0	13.9	27.0	18.7	1.5	1.8	37.7	39.0
	2023	597	44.5	44.1	10.3	25.6	19.1	0.5	0.4	50.0	39.0
Singapore	2019	698	57.2	56.8	3.4	25.4	13.6	0.7	0.1	57.8	56.7
	2023	402	56.5	56.5	5.9	22.5	15.1	0.0	0.0	59.4	53.9
Sweden	2019	577	44.0	41.9	11.8	32.8	8.7	1.8	3.0	44.7	43.3
	2023	714	45.2	44.6	12.6	27.2	14.3	0.6	0.6	46.7	43.6
United Arab Emirates	2019	3194	39.9	38.7	12.8	26.8	18.7	2.2	0.9	41.7	38.4
	2023	5310	37.8	37.4	8.5	27.7	25.5	0.4	0.5	37.4	38.2
United States	2019	1260	42.9	41.8	7.8	29.0	18.9	1.3	1.2	42.9	43.0
	2023	1151	33.8	33.2	8.8	30.3	26.1	0.5	1.0	32.1	35.2
International Avg. (20)	2019	15219	48.8	47.6	9.2	23.8	16.6	1.5	1.2	49.4	48.3
	2023	18805	44.5	44.2	10.5	25.1	19.2	0.6	0.4	44.9	44.2

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing

B_SE4_12 SE62235: Negative effects of fertilizer - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1172	30.8	29.8	14.1	30.5	22.2	2.5	0.9	30.7	30.9
	2023	2424	30.6	30.3	9.8	29.3	29.7	0.3	0.5	29.2	32.0
Dubai, UAE	2019	821	50.9	49.8	6.9	25.9	15.4	1.6	0.5	48.7	53.0
	2023	1158	45.1	44.8	5.2	27.7	21.7	0.2	0.5	42.9	47.2

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Applying
B_SE4_13 SE62180: Melting permafrost - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	49.7	46.1	13.9	11.1	21.5	3.1	4.1	47.9	51.4
	2023	646	52.3	49.3	12.6	11.7	20.8	4.6	1.0	51.9	52.6
Chinese Taipei	2019	698	77.5	77.3	6.5	5.6	10.3	0.4	0.0	74.6	80.5
	2023	475	78.0	78.0	6.2	5.0	10.7	0.0	0.0	80.9	75.4
England	2019	481	69.2	64.9	8.1	6.8	14.1	5.5	0.6	70.3	68.0
	2023	602	78.0	77.4	4.4	5.3	12.2	0.3	0.4	78.0	77.9
Finland	2019	703	71.4	69.8	8.7	6.7	12.6	1.6	0.7	77.3	66.5
	2023	804	62.5	62.1	11.9	9.7	15.7	0.3	0.4	63.9	61.1
France	2019	548	65.2	60.9	10.1	8.8	13.6	4.0	2.6	66.2	64.2
	2023	632	62.2	61.6	11.6	8.5	17.3	0.9	0.1	62.2	62.2
Georgia	2019	480	41.6	38.2	23.4	11.9	18.2	5.7	2.5	41.2	42.0
	2023	688	43.1	41.8	20.8	11.4	23.0	2.2	0.8	45.2	41.0
Hong Kong SAR	2019	470	64.5	62.8	13.8	9.0	11.9	1.1	1.4	63.1	65.6
	2023	623	68.2	67.7	10.2	7.4	14.0	0.0	0.7	68.9	67.3
Hungary	2019	648	54.3	53.5	15.1	10.9	19.1	1.5	0.0	52.2	56.4
	2023	765	47.8	47.7	14.4	16.1	21.4	0.3	0.0	44.1	51.3
Israel	2019	541	51.5	50.4	20.2	10.8	16.5	1.1	1.1	49.3	54.0
	2023	733	52.0	51.2	18.5	12.1	16.7	0.8	0.7	54.8	49.3
Italy	2019	528	54.4	51.8	12.1	9.9	21.4	2.7	2.1	54.6	54.2
	2023	645	60.7	59.8	11.2	10.4	17.1	1.6	0.0	58.3	63.2
Korea, Rep. of	2019	552	72.2	71.6	6.3	6.5	14.8	0.8	0.0	74.2	70.2
	2023	365	71.0	71.0	7.6	6.3	15.2	0.0	0.0	71.3	70.6
Lithuania	2019	546	67.4	66.7	7.5	5.9	18.9	1.0	0.0	66.9	67.9
	2023	758	65.4	65.2	9.8	6.9	17.8	0.2	0.0	68.1	62.6
Malaysia	2019	1012	53.9	52.7	18.4	11.2	15.5	0.6	1.6	55.3	52.5
	2023	1244	43.0	43.0	21.4	11.3	24.2	0.0	0.1	43.0	43.0
Norway (9)	2019	658	66.5	63.7	7.4	8.4	16.3	1.4	2.9	66.9	66.2
	2023	889	68.2	66.2	8.7	9.1	13.1	1.1	1.8	70.7	66.1
Portugal	2019	484	62.6	61.3	13.6	9.1	14.0	1.5	0.6	61.8	63.6
	2023	762	63.4	63.2	14.8	9.4	12.2	0.3	0.0	64.9	62.0
Qatar	2019	559	52.3	50.2	14.5	11.8	19.5	1.9	2.1	57.6	47.0
	2023	597	54.2	53.6	12.3	11.5	21.4	0.8	0.4	57.1	51.4
Singapore	2019	698	82.2	81.4	5.8	2.9	8.9	1.0	0.1	84.3	80.2
	2023	402	82.3	82.3	5.3	6.2	6.2	0.0	0.0	84.2	80.7
Sweden	2019	577	67.2	63.2	11.2	7.0	12.7	2.9	3.0	68.2	66.0
	2023	714	68.6	67.7	8.8	7.2	15.0	0.7	0.6	69.3	67.7
United Arab Emirates	2019	3191	51.7	49.5	13.8	14.5	18.1	2.9	1.3	52.3	51.2
	2023	5310	57.3	56.6	14.3	12.3	15.6	0.6	0.6	57.0	57.5
United States	2019	1260	67.7	65.7	9.3	8.4	13.7	1.5	1.5	67.1	68.4
	2023	1151	64.7	63.7	11.9	7.5	15.3	0.2	1.3	61.5	67.7
International Avg. (20)	2019	15216	62.2	60.1	12.0	8.9	15.6	2.1	1.4	62.6	61.8
	2023	18805	62.1	61.5	11.8	9.3	16.3	0.7	0.5	62.8	61.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Applying
B_SE4_13 SE62180: Melting permafrost - MC - Key: A

COUNTRY	YEAR	N	DIFF %	A %	B %	C %	D %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1169	45.0	43.0	16.2	18.1	18.1	3.2	1.3	47.1	43.1
	2023	2424	51.9	51.2	17.1	13.8	16.6	0.6	0.7	53.3	50.5
Dubai, UAE	2019	821	69.0	66.6	8.2	7.1	14.7	2.4	1.1	67.4	70.5
	2023	1158	73.1	72.3	8.7	6.1	11.8	0.6	0.5	70.6	75.4

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent
Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Knowing

B_SE4_14 SE62022: Fresh water or salt water (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	42.8	54.6	40.8	0.3	4.3	39.3	45.9
	2023	646	42.9	55.6	41.7	0.6	2.0	39.2	45.9
Chinese Taipei	2019	698	59.2	40.8	59.1	0.1	0.0	55.1	63.2
	2023	475	63.0	37.0	63.0	0.0	0.0	58.1	67.2
England	2019	481	30.0	68.0	29.2	2.0	0.8	26.4	33.8
	2023	602	32.6	66.7	32.2	0.6	0.4	30.8	34.3
Finland	2019	703	46.5	52.9	46.0	0.2	0.9	43.8	48.8
	2023	804	40.3	59.4	40.1	0.2	0.4	36.6	44.0
France	2019	548	46.0	52.1	44.4	0.6	2.8	41.0	51.2
	2023	632	45.0	54.9	44.8	0.2	0.1	46.9	43.0
Georgia	2019	479	23.0	74.2	22.2	0.5	3.1	18.0	27.6
	2023	688	28.2	70.7	27.7	0.7	0.8	27.9	28.5
Hong Kong SAR	2019	470	38.2	60.8	37.6	0.2	1.4	33.5	42.2
	2023	623	37.0	62.6	36.7	0.0	0.7	32.3	42.2
Hungary	2019	648	44.2	55.7	44.1	0.3	0.0	38.5	49.7
	2023	765	40.3	59.7	40.3	0.0	0.0	33.1	47.2
Israel	2019	541	33.3	65.7	32.8	0.5	1.1	28.7	38.5
	2023	733	31.6	67.7	31.2	0.2	0.9	26.4	36.5
Italy	2019	528	45.5	52.8	44.0	1.1	2.1	47.0	43.9
	2023	645	44.6	55.3	44.5	0.2	0.0	41.6	47.6
Korea, Rep. of	2019	552	33.1	66.5	32.9	0.6	0.0	26.9	39.2
	2023	365	39.3	60.6	39.2	0.2	0.0	37.1	41.7
Lithuania	2019	546	41.3	58.6	41.2	0.2	0.0	40.6	41.9
	2023	758	41.8	58.0	41.7	0.2	0.0	43.0	40.6
Malaysia	2019	1012	20.3	77.9	19.9	0.3	2.0	17.8	23.0
	2023	1244	24.4	75.5	24.4	0.0	0.1	22.6	26.4
Norway (9)	2019	658	56.7	41.9	54.8	0.5	2.9	55.7	57.7
	2023	889	53.6	45.4	52.5	0.1	2.0	48.7	57.7
Portugal	2019	484	28.2	71.2	27.9	0.2	0.7	28.5	27.8
	2023	762	32.1	67.8	32.1	0.1	0.0	34.2	30.2
Qatar	2019	559	27.1	70.7	26.2	0.8	2.3	25.9	28.2
	2023	597	40.9	58.8	40.7	0.0	0.4	36.8	45.0
Singapore	2019	698	38.9	60.7	38.7	0.5	0.1	37.2	40.6
	2023	402	42.1	57.9	42.1	0.0	0.0	40.2	43.7
Sweden	2019	577	42.0	55.3	40.0	1.1	3.6	39.6	44.5
	2023	714	45.6	54.1	45.3	0.0	0.6	41.4	50.2
United Arab Emirates	2019	3194	35.6	63.1	34.9	0.5	1.5	34.5	36.6
	2023	5310	35.2	64.2	34.9	0.2	0.7	32.3	38.1
United States	2019	1260	45.8	53.1	45.0	0.1	1.8	44.0	47.6
	2023	1151	42.3	56.9	41.7	0.1	1.3	39.4	44.9
International Avg. (20)	2019	15218	38.9	59.8	38.1	0.5	1.6	36.1	41.6
	2023	18805	40.1	59.4	39.9	0.2	0.5	37.4	42.7

DIFF = Percent correct

Because of missing gender information, some totals may appear inconsistent

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Science: Earth Science / Knowing

B_SE4_14 SE62022: Fresh water or salt water (DERIVED) - CR - 1 Point

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019 2023	1173 2424	27.8 30.5	70.9 68.8	27.2 30.3	0.4 0.1	1.5 0.8	28.1 27.0	27.5 34.1
Dubai, UAE	2019 2023	821 1158	46.3 41.5	52.5 58.0	45.2 41.1	0.8 0.2	1.5 0.6	43.8 38.2	48.7 44.5

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College

Science: Earth Science / Reasoning
B_SE4_15 SE62243: Animals and habitat (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Chile	2019	582	48.6	33.4	27.9	30.8	3.0	4.8	49.5	47.7
	2023	646	49.0	32.8	30.8	30.9	3.0	2.5	47.7	50.0
Chinese Taipei	2019	698	84.0	8.5	14.9	76.3	0.3	0.0	84.9	83.0
	2023	475	80.9	11.5	15.1	73.3	0.0	0.0	78.0	83.4
England	2019	481	70.4	19.9	18.1	59.7	1.5	0.8	70.3	70.4
	2023	602	69.9	21.9	15.6	61.0	0.9	0.6	70.3	69.5
Finland	2019	703	81.9	11.6	12.3	74.0	1.2	0.9	87.4	77.3
	2023	804	74.2	17.8	15.2	65.6	0.9	0.4	77.8	70.5
France	2019	548	52.4	30.6	28.9	35.2	1.9	3.4	51.9	52.9
	2023	632	47.7	34.9	33.5	30.4	1.1	0.1	49.6	45.8
Georgia	2019	481	33.3	44.1	25.7	15.6	10.3	4.3	34.2	32.5
	2023	688	33.4	47.3	27.9	16.8	6.2	1.8	38.7	28.1
Hong Kong SAR	2019	470	75.1	15.4	17.9	64.3	1.4	1.0	75.5	74.7
	2023	623	70.9	19.4	18.6	60.4	0.6	1.0	68.8	73.2
Hungary	2019	648	72.7	18.0	17.6	62.7	1.5	0.1	70.1	75.3
	2023	765	68.5	21.8	19.4	58.7	0.1	0.0	67.2	69.6
Israel	2019	541	51.5	35.5	23.5	38.5	1.4	1.2	50.9	52.3
	2023	733	47.7	36.4	29.2	32.0	1.4	1.0	46.9	48.5
Italy	2019	528	61.6	22.5	27.4	44.3	3.5	2.3	61.7	61.5
	2023	645	59.5	26.6	27.6	45.6	0.1	0.0	58.9	60.2
Korea, Rep. of	2019	552	75.7	17.2	14.3	68.5	0.0	0.0	75.5	75.8
	2023	365	74.8	16.2	17.9	65.6	0.3	0.0	78.6	70.5
Lithuania	2019	546	70.2	21.2	16.8	61.3	0.6	0.0	69.2	71.2
	2023	758	64.4	23.0	25.1	51.7	0.3	0.0	65.5	63.3
Malaysia	2019	1012	46.9	36.8	29.7	30.8	0.5	2.3	47.9	45.8
	2023	1244	39.4	45.8	29.1	24.8	0.2	0.1	39.4	39.5
Norway (9)	2019	658	69.6	20.4	16.1	57.2	3.3	2.9	69.5	69.9
	2023	889	63.0	27.2	17.2	52.4	1.0	2.2	68.3	58.6
Portugal	2019	484	57.5	24.8	33.9	39.5	1.0	0.7	56.4	58.8
	2023	762	52.8	31.3	31.0	36.9	0.8	0.0	53.7	52.0
Qatar	2019	559	51.7	32.2	27.1	35.3	2.8	2.6	51.3	52.0
	2023	596	49.0	37.7	25.1	35.7	0.8	0.7	50.2	47.8
Singapore	2019	698	72.7	17.0	20.1	62.1	0.6	0.1	72.7	72.7
	2023	402	71.1	19.2	19.6	61.3	0.0	0.0	71.4	70.7
Sweden	2019	577	67.7	21.4	16.8	54.1	3.9	3.9	69.0	66.3
	2023	714	65.5	24.7	18.5	55.2	1.0	0.6	68.2	62.5
United Arab Emirates	2019	3191	49.6	36.9	23.0	36.0	2.2	1.9	49.9	49.3
	2023	5310	49.0	38.3	23.9	36.4	0.6	0.8	51.2	46.9
United States	2019	1260	70.0	20.6	17.3	59.6	0.5	2.0	71.0	69.2
	2023	1151	60.5	27.8	21.5	48.4	0.9	1.3	60.1	60.9
International Avg. (20)	2019	15217	63.1	24.4	21.5	50.3	2.1	1.8	63.4	62.9
	2023	18804	59.6	28.1	23.1	47.1	1.0	0.7	60.5	58.6

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Science: Earth Science / Reasoning
B_SE4_15 SE62243: Animals and habitat (DERIVED) - CR - 2 Points

COUNTRY	YEAR	N	DIFF %	0pt %	1pt %	2pt %	OMITTED %	NOT REACHED %	GIRL PCT RIGHT	BOY PCT RIGHT
Abu Dhabi, UAE	2019	1170	39.2	47.9	20.8	27.1	2.0	2.1	40.5	38.0
	2023	2424	41.3	46.0	23.5	28.9	0.7	0.9	42.9	39.7
Dubai, UAE	2019	821	67.7	22.0	18.6	56.3	1.4	1.8	65.9	69.5
	2023	1158	65.3	23.7	21.2	54.0	0.4	0.7	66.8	64.0

DIFF = Percent correct
Because of missing gender information, some totals may appear inconsistent

Produced by TIMSS & PIRLS International Study Center at Boston College