

Safe and Orderly School–Teachers’ Reports Scale, Eighth Grade

The Safe and Orderly School–Teachers’ Reports (SOS) scale was created based on teachers’ degree of agreement with the eight statements described below.

Items in the TIMSS 2015 Safe and Orderly School–Teachers’ Reports Scale, Eighth Grade¹

Thinking about your current school, indicate the extent to which you agree or disagree with each of the following statements.

		Agree a lot	Agree a little	Disagree a little	Disagree a lot	
T	BTBG07A	1) This school is located in a safe neighborhood -----				○
T	BTBG07B	2) I feel safe at this school -----				○
T	BTBG07C	3) This school’s security policies and practices are sufficient -----				○
T	BTBG07D	4) The students behave in an orderly manner -----				○
T	BTBG07E	5) The students are respectful of the teachers -----				○
	BTBG07F	6) The students respect school property -----				○
	BTBG07G	7) This school has clear rules about student conduct -----				○
	BTBG07H	8) This school’s rules are enforced in a fair and consistent manner -----				○

Very Safe and Orderly 10.6 Safe and Orderly 7.2 Less than Safe and Orderly

T Trend item—item was included in the same scale in TIMSS 2011 and was used for linking the TIMSS 2011 and TIMSS 2015 scales.

¹ For the purpose of scaling, categories in which there were very few respondents were combined. The categories “Disagree a little” and “Disagree a lot” were combined for all variables. The scale statistics that are reported herein reflect analysis of the items following collapsing.

Item Parameters for the TIMSS 2015 Safe and Orderly School - Teachers' Reports Scale, Eighth Grade

Item	delta	tau_1	tau_2	Infit
BTBG07A	-0.80503	-1.12750	1.12750	1.25
BTBG07B	-1.38913	-1.25587	1.25587	1.00
BTBG07C	-0.51907	-1.43177	1.43177	1.02
BTBG07D	0.92295	-1.81668	1.81668	0.92
BTBG07E	0.58019	-1.77905	1.77905	0.92
BTBG07F	1.54089	-1.74888	1.74888	0.94
BTBG07G	-0.48566	-1.36955	1.36955	1.13
BTBG07H	0.15486	-1.50409	1.50409	1.07

Scale Transformation Constants for the TIMSS 2015 Safe and Orderly School - Teachers' Reports Scale, Eighth Grade

Scale Transformation Constants

A = 8.92966

B = 1.031502

Transformed Scale Score = 8.92966 + 1.031502 • Logit Scale Score

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



**Equivalence Table of Raw and Transformed Scale Scores for the TIMSS
2015 Safe and Orderly School - Teachers' Reports Scale, Eighth Grade**

Raw Score	Transformed Scale Score	Cutpoint
0	4.21352	
1	5.50950	
2	6.20806	
3	6.73583	
4	7.18910	7.2
5	7.60560	
6	8.00514	
7	8.40086	
8	8.79988	
9	9.21200	
10	9.64573	
11	10.11020	
12	10.61839	10.6
13	11.18541	
14	11.83862	
15	12.65468	
16	14.06211	

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

Cronbach's Alpha Reliability Coefficient and Principal Components Analysis of the Items in the TIMSS 2015 Safe and Orderly School - Teachers' Reports Scale, Eighth Grade

Country	Cronbach's Alpha Reliability Coefficient	Percent of Variance Explained	Component Loadings for Each Item							
			BTB007A	BTB007B	BTB007C	BTB007D	BTB007E	BTB007F	BTB007G	BTB007H
Australia	0.90	60	0.65	0.75	0.72	0.86	0.87	0.81	0.72	0.78
Bahrain	0.86	52	0.55	0.63	0.68	0.74	0.80	0.77	0.75	0.80
Botswana (9)	0.84	47	0.67	0.74	0.67	0.75	0.77	0.69	0.55	0.64
Canada	0.87	53	0.58	0.58	0.64	0.83	0.82	0.81	0.74	0.76
Chile	0.85	51	0.44	0.64	0.74	0.82	0.80	0.72	0.72	0.77
Chinese Taipei	0.89	57	0.70	0.78	0.71	0.79	0.77	0.75	0.78	0.78
Egypt	0.87	53	0.60	0.67	0.70	0.74	0.73	0.78	0.80	0.76
England	0.86	51	0.49	0.62	0.59	0.83	0.82	0.81	0.70	0.79
Georgia	0.78	41	0.60	0.67	0.75	0.63	0.68	0.53	0.57	0.65
Hong Kong SAR	0.81	44	0.48	0.59	0.58	0.74	0.78	0.75	0.65	0.65
Hungary	0.87	52	0.54	0.69	0.75	0.80	0.80	0.77	0.66	0.73
Iran, Islamic Rep. of	0.84	47	0.58	0.68	0.69	0.75	0.71	0.71	0.71	0.65
Ireland	0.86	51	0.71	0.62	0.63	0.84	0.84	0.79	0.53	0.68
Israel	0.84	48	0.49	0.62	0.60	0.79	0.77	0.76	0.72	0.74
Italy	0.85	49	0.68	0.76	0.67	0.72	0.73	0.72	0.65	0.65
Japan	0.84	48	0.65	0.70	0.62	0.79	0.76	0.78	0.56	0.67
Jordan	0.88	54	0.60	0.70	0.75	0.77	0.74	0.74	0.77	0.77
Kazakhstan	0.86	51	0.59	0.68	0.68	0.78	0.73	0.72	0.75	0.80
Korea, Rep. of	0.88	55	0.68	0.75	0.76	0.76	0.79	0.72	0.72	0.75
Kuwait	0.86	51	0.50	0.64	0.72	0.76	0.73	0.73	0.79	0.77
Lebanon	0.85	50	0.44	0.48	0.64	0.76	0.82	0.82	0.77	0.83
Lithuania	0.86	51	0.43	0.76	0.78	0.73	0.76	0.73	0.69	0.73
Malaysia	0.86	50	0.61	0.65	0.71	0.75	0.73	0.72	0.71	0.75
Malta	0.87	52	0.51	0.67	0.72	0.83	0.78	0.80	0.69	0.73
Morocco	0.89	56	0.67	0.78	0.78	0.81	0.79	0.75	0.69	0.73
New Zealand	0.88	55	0.58	0.64	0.69	0.83	0.85	0.80	0.73	0.75
Norway (9)	0.77	39	0.51	0.46	0.45	0.78	0.79	0.72	0.55	0.63
Oman	0.86	52	0.40	0.54	0.70	0.84	0.83	0.78	0.76	0.78
Qatar	0.83	46	0.33	0.61	0.57	0.76	0.75	0.76	0.76	0.78
Russian Federation	0.84	47	0.59	0.62	0.68	0.75	0.75	0.78	0.55	0.74
Saudi Arabia	0.86	51	0.59	0.66	0.73	0.76	0.74	0.79	0.67	0.74
Singapore	0.89	58	0.58	0.73	0.71	0.83	0.82	0.82	0.77	0.79
Slovenia	0.87	53	0.65	0.73	0.78	0.76	0.76	0.73	0.68	0.71
South Africa (9)	0.88	55	0.73	0.78	0.75	0.79	0.72	0.80	0.64	0.72
Sweden	0.86	51	0.56	0.62	0.75	0.78	0.77	0.76	0.67	0.77
Thailand	0.86	50	0.57	0.70	0.75	0.76	0.73	0.71	0.72	0.70
Turkey	0.88	56	0.72	0.76	0.80	0.78	0.77	0.71	0.72	0.69
United Arab Emirates	0.86	51	0.48	0.56	0.63	0.79	0.78	0.82	0.80	0.79
United States	0.90	59	0.60	0.71	0.74	0.87	0.86	0.84	0.70	0.77
Benchmarking Participants										
Buenos Aires, Argentina	0.80	45	0.31	0.70	0.78	0.74	0.73	0.70	0.56	0.69
Ontario, Canada	0.87	53	0.58	0.62	0.61	0.84	0.83	0.80	0.75	0.76
Quebec, Canada	0.85	49	0.50	0.50	0.66	0.81	0.79	0.80	0.72	0.74
Norway (8)	0.79	41	0.40	0.56	0.58	0.79	0.80	0.73	0.56	0.61
Abu Dhabi, UAE	0.86	51	0.49	0.53	0.62	0.78	0.78	0.83	0.78	0.78
Dubai, UAE	0.87	52	0.35	0.61	0.63	0.82	0.77	0.82	0.83	0.81
Florida, US	0.90	59	0.71	0.71	0.74	0.85	0.84	0.81	0.72	0.75

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

Relationship Between the TIMSS 2015 Safe and Orderly School - Teachers' Reports Scale, Eighth Grade, and TIMSS 2015 Achievement

Country	Pearson's Correlation with Achievement				Variance in Achievement Accounted for by Difference Between Regions of the Scale (η^2)	
	(r)		(r ²)		Mathematics	Science
	Mathematics	Science	Mathematics	Science		
Australia	0.29	0.20	0.08	0.04	0.07	0.04
Bahrain	0.14	0.15	0.02	0.02	0.01	0.01
Botswana (9)	0.10	0.08	0.01	0.01	0.01	0.01
Canada	0.04	0.10	0.00	0.01	0.01	0.02
Chile	0.28	0.27	0.08	0.07	0.06	0.06
Chinese Taipei	0.13	0.09	0.02	0.01	0.01	0.00
Egypt	0.15	0.20	0.02	0.04	0.02	0.03
England	0.22	0.21	0.05	0.04	0.04	0.04
Georgia	0.06	0.04	0.00	0.00	0.02	0.00
Hong Kong SAR	0.25	0.13	0.06	0.02	0.03	0.01
Hungary	0.21	0.21	0.04	0.04	0.03	0.03
Iran, Islamic Rep. of	0.18	0.20	0.03	0.04	0.02	0.02
Ireland	0.25	0.20	0.06	0.04	0.07	0.05
Israel	0.20	0.08	0.04	0.01	0.03	0.01
Italy	0.17	0.15	0.03	0.02	0.03	0.02
Japan	0.07	0.12	0.01	0.01	0.00	0.01
Jordan	0.15	0.17	0.02	0.03	0.02	0.03
Kazakhstan	0.05	0.02	0.00	0.00	0.00	0.00
Korea, Rep. of	0.05	0.06	0.00	0.00	0.00	0.00
Kuwait	0.14	0.17	0.02	0.03	0.00	0.03
Lebanon	0.07	0.07	0.00	0.01	0.01	0.01
Lithuania	0.07	0.01	0.00	0.00	0.00	0.00
Malaysia	0.18	0.09	0.03	0.01	0.05	0.00
Malta	0.20	0.16	0.04	0.03	0.03	0.03
Morocco	0.13	0.12	0.02	0.01	0.01	0.01
New Zealand	0.17	0.28	0.03	0.08	0.02	0.07
Norway (9)	0.11	0.09	0.01	0.01	0.01	0.01
Oman	0.14	0.10	0.02	0.01	0.02	0.01
Qatar	0.12	0.11	0.01	0.01	0.00	0.02
Russian Federation	0.15	0.09	0.02	0.01	0.01	0.01
Saudi Arabia	0.18	0.18	0.03	0.03	0.02	0.03
Singapore	0.20	0.21	0.04	0.04	0.02	0.02
Slovenia	0.05	0.06	0.00	0.00	0.01	0.00
South Africa (9)	0.23	0.24	0.05	0.06	0.05	0.05
Sweden	0.13	0.16	0.02	0.02	0.01	0.03
Thailand	0.08	0.04	0.01	0.00	0.01	0.00
Turkey	0.19	0.20	0.04	0.04	0.05	0.02
United Arab Emirates	0.29	0.28	0.08	0.08	0.05	0.07
United States	0.28	0.22	0.08	0.05	0.07	0.05
International Median	0.15	0.15	0.02	0.02	0.02	0.02
Benchmarking Participants						
Buenos Aires, Argentina	0.06	0.17	0.00	0.03	0.00	0.01
Ontario, Canada	0.07	0.06	0.00	0.00	0.01	0.01
Quebec, Canada	0.13	0.26	0.02	0.07	0.01	0.07
Norway (8)	0.11	0.05	0.01	0.00	0.01	0.00
Abu Dhabi, UAE	0.26	0.24	0.07	0.06	0.04	0.06
Dubai, UAE	0.25	0.29	0.06	0.09	0.05	0.07
Florida, US	0.17	0.18	0.03	0.03	0.04	0.03

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