

Item Parameters for the TIMSS 2015 Students Confident in Earth Science Scale, Eighth Grade

Item	delta	tau_1	tau_2	tau_3	Infit
BSBE28A	-0.42005	-1.17384	-0.44817	1.62201	0.90
BSBE28B*	-0.06756	-1.01438	-0.28584	1.30022	0.97
BSBE28C*	0.19190	-1.06848	-0.14054	1.20902	0.93
BSBE28D	-0.15726	-1.36012	-0.24217	1.60229	0.89
BSBE28E	0.31769	-1.54826	0.00872	1.53954	1.01
BSBE28F	0.24063	-1.49092	-0.07339	1.56431	1.04
BSBE28G*	0.04915	-0.92539	-0.33018	1.25557	1.02
BSBE28H*	-0.15450	-0.55000	-0.43709	0.98709	1.07

*Reverse coded

Scale Transformation Constants for the TIMSS 2015 Students Confident in Earth Science Scale, Eighth Grade

Scale Transformation Constants	
A = 8.804148	
B = 1.447084	

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

Relationship Between the TIMSS 2015 Students Confident in Earth Science Scale, Eighth Grade, and TIMSS 2015 Science Achievement

Country	Pearson's Correlation with Science Achievement		Variance in Science Achievement for by Difference Between Region Scale ²
	(r)	(r ²)	
Georgia	0.38	0.14	0.15
Hungary	0.22	0.05	0.07
Kazakhstan	0.18	0.03	0.04
Lebanon	-	-	-
Lithuania	0.30	0.09	0.09
Malta	0.32	0.10	0.12
Morocco	0.30	0.09	0.08
Russian Federation	0.18	0.03	0.04
Slovenia	0.27	0.07	0.09
Sweden	-	-	-
International Median	0.28	0.08	0.08

A dash (-) indicates comparable data not available.

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