

# Students Value Science Scale, Eighth Grade

The Students Value Science (SVS) scale was created based on students' degree of agreement with the nine statements described below.

Items in the TIMSS 2015 Students Value Science Scale, Eighth Grade

T	BSBS24A
T	BSBS24B
T	BSBS24C
T	BSBS24D
T	BSBS24E
	BSBS24F
	BSBS24G
	BSBS24H
	BSBS24I

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.

**Item Parameters for the TIMSS 2015 S domain Value Science Scale, Eighth Grade**

Item	Difficulty	Discrimination	Guessing	Upper Asymptote	Lower Asymptote
2	-0.72	-1.32	-0.21	1.720	1.12
2	0.23	-1.011	-0.1011	2.022	1.17
2	-0.0110	-1.3211	-0.0210	1.721	0.2
2	0.2137	-1.2	0.027	1.701	0.1
2	0.22	-1.3	0.117	1.720	1.21
2	-0.0211	-1.0	-0.271	1.	0.2
2	-0.07333	-1.	-0.2323	1.	0.0
2	-0.210	-1.71	-0.20	1.710	1.2
2	-0.7030	-1.22	-0.337	1.	1.07

**Scale Transformation Constants for the TIMSS 2015 S domain Value Science Scale, Eighth Grade**

$\frac{1}{0.7}$	$\text{Transformed Scale Score} = 8.556049 + 0.9487 \cdot \text{Logit Scale Score}$
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**Equivalence Table of Raw and Transformed Scale Scores for the TIMSS 2015 Student Value Science Scale, Eighth Grade**

Raw Score	Transformed Score	Transformed Score
0	7.17	
1	7.2	
2	7.17	
3	7.1	
	7.2	
	7.302	
	7.302	
7	7.1	
	7.337	
	7.337	
10	7.23	
11	7.1	
12	7.1	
13	7.30	
14	7.3	
15	7.310	
16	7.302	
17	7.203	
18	7.17	
19	7.007	
20	7.077	
21	10.1730	
22	10.211	
23	10.7137	10.7
24	11.0	
25	11.17	
26	12.032	
27	13.171	

TIMSS 2015 Student Value Science Scale, Eighth Grade



**Relationship Between the TIMSS 2015 Student Valuation Science Scale, Eighth Grade, and TIMSS 2015 Science Achievement**

Country	$r_{1}$	$r_{2}$	$r_{1} - r_{2}$
Australia	0.32	0.10	0.0
Austria	0.20	0.0	0.03
Bahrain	0.3	0.1	0.1
Belgium	0.2	0.0	0.0*
Canada	0.03	0.00	0.00
Chile	0.3*	0.12	0.10
China	0.21	0.0*	0.0
Czechia	0.2	0.0	0.0
Denmark	0.0	0.01	0.01
Egypt	0.21	0.0	0.0
Estonia	0.07	0.01	0.01
France		0.01	
Germany		0.10	
Greece		0.03	
Guatemala	0.1*	0.02	0.01
Hong Kong	0.32	0.10	0.07
Hungary	0.1	0.02	0.03
Indonesia	0.10	0.01	0.01
Iran	0.3	0.1*	0.13
Israel	0.1	0.02	0.01
Italy	0.22	0.0*	0.0*
Japan	0.0	0.00	0.00
Latvia	0.20	0.0	0.0
Lithuania	0.3	0.1	0.1*
Luxembourg	0.0	0.01	0.01
Macao	0.22	0.0*	0.0
Malaysia	0.1	0.03	0.03
Mexico	0.1	0.03	0.03
Netherlands	0.2	0.07	0.0
Poland	0.01	0.00	0.00
Russia	0.13	0.02	0.02
Saudi Arabia	0.2*	0.0	0.07
Singapore	0.2	0.0	0.0
South Korea	0.02	0.00	0.01
Spain	0.13	0.02	0.03
Sweden	0.21	0.0	0.0
Switzerland	0.10	0.01	0.01
Taiwan	0.2	0.0	0.0
Turkey	0.21	0.0	0.0*
U.S.		0.0	0.0
Ukraine		0.0	0.0
United Kingdom		0.0	0.0
Uzbekistan		0.0	0.0
Yemen		0.0	0.0
<b>Mean</b>		0.0	0.0
<b>Standard Error</b>			
Country	-0.01	0.00	0.00
Country	0.2	0.0	0.0*
Country	0.2	0.0	0.0
Country	0.13	0.02	0.01
Country	0.23	0.0*	0.0
Country	0.23	0.0*	0.0*
Country	0.1	0.03	0.03