## TIMSS 2011 The TIMSS 2011 Students Engaged in Chemistry Lessons Scale, Eighth Grade

The Students Engaged in Chemistry Lessons (ESC) scale was created based on students' degree of agreement to the five statements described below. This scale was administered in countries where the sciences are taught as separate subjects. See Creating and Interpreting TIMSS and PIRLS 2011 Context Questionnaire Scales for more information on how the scales were formed.

Exhibit 1: Items in the TIMSS 2011 Students Engaged in Chemistry Lessons Scale, Eighth Grade

How much do you agree with these statements	about your o Agree a lot	chemistry lesso Agree a little	Disagree	Disagree a lot
1) I know what my teacher expects me to do	A	— A ——	_A	-A
2) I think of things not related to the lesson*	A	— A ——	-A	-A
3) My teacher is easy to understand	A	— A ——	-A	

Exhibit 2: Item Parameters for the TIMSS 2011 Students Engaged in Chemistry Lessons Scale, Eighth Grade

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BSBC27A	-1.06724	-0.84680	-0.42016	1.26696
BSBC27B*	-0.43556	-1.09376	0.14834	0.94542
BSBC27C	-0.95359	-0.83868	-0.24539	1.08407
BSBC27D	-1.05188	-0.79555	-0.27085	1.06640
BSBC27E	-0.71855	-0.78669	-0.21159	0.99828

<sup>\*</sup>Reverse coded

## **Exhibit 3: Scale Transformation Constants**

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A = 10.01915	Transformed Scale Score - 10.01015 + 1.47057 + Logit Scale Score			
B = 1.47057	- Transformed Scale Score = 10.01915 + 1.47057 • Logit Scale Score			

## Exhibit 4: Equivalence Table of the Raw Score and the Transformed Scale Score

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