

Appendix B

Characteristics of the Items in the TIMSS 2011 Science Assessment

Appendix B.1: Distribution of Assessment Items by Content Domain, Cognitive Domain, and Item Format

TIMSS Assessment Items	Multiple-choice Items	Constructed-response Items	Total Items	Percentage of Score Points
Content Domain				
Life Science	36 (36)	39 (46)	75 (82)	45%
Physical Science	37 (37)	26 (27)	63 (64)	35%
Earth Science	20 (20)	14 (18)	34 (38)	21%
Total	93 (93)	79 (91)	172 (184)	100%
Percentage of Score Points	51%	49%		
Cognitive Domain				
Knowing	42 (42)	27 (34)	69 (76)	41%
Applying	38 (38)	33 (37)	71 (75)	41%
Reasoning	13 (13)	19 (20)	32 (33)	18%
Total	93 (93)	79 (91)	172 (184)	100%
Percentage of Score Points	51%	49%		

Score points are shown in parentheses.
Because of rounding some results may appear inconsistent.

SOURCE: IEA's Trends in International Mathematics and Science Study – TIMSS 2011

Appendix B.2: Distribution of Assessment Items by Content Domain, Cognitive Domain, and Item Format

TIMSS Assessment Items	Multiple-choice Items	Constructed-response Items	Total Items	Percentage of Score Points
Content Domain				
Biology	38 (38)	41 (49)	79 (87)	37%
Chemistry	22 (22)	22 (25)	44 (47)	20%
Physics	29 (29)	26 (29)	55 (58)	25%
Earth Science	21 (21)	18 (21)	39 (42)	18%
Total	110 (110)	107 (124)	217 (234)	100%
Percentage of Score Points	47%	53%		
Cognitive Domain				
Knowing	58 (58)	15 (18)	73 (76)	32%
Applying	40 (40)	52 (63)	92 (103)	44%
Reasoning	12 (12)	40 (43)	52 (55)	24%
Total	110 (110)	107 (124)	217 (234)	100%
Percentage of Score Points	47%	53%		

Score points are shown in parentheses.
Because of rounding some results may appear inconsistent.

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