Appendix C

Country Adaptations to Items and Item Scoring

Fourth Grade

Items deleted

ALL COUNTRIES
M09_04, M13_04 Mathematics (faulty distracters)
S08_07, S09_06, S12_10 Science (faulty distracters)

ALGERIA
M08_08, M10_09, M12_13B Mathematics (scorer reliability less than 70%)
S06_05 Science (poor discrimination)
S08_05 Science (scorer reliability less than 70%)

AUSTRIA
S07_02 Science (translation error)

COLOMBIA
S11_04 Science (too few valid responses)

DENMARK
M11_03 Mathematics (printing error)

DUBAI, UAE
M09_05 Mathematics (negative discrimination)

EL SALVADOR
M05_03 Mathematics (poor discrimination)

GEORGIA
M03_03, M05_06 Mathematics (negative discrimination)
S04_04 Science (scorer reliability less than 70%)
HONG KONG SAR
S10_05 Science (negative discrimination)

IRAN, ISLAMIC REP. OF
S10_05 Science (negative discrimination)

KUWAIT
S07_10 Science (negative discrimination)
S11_04 Science (erroneous application of scoring guide)

LATVIA
M04_07 Mathematics (scorer reliability less than 70%)
S01_01A, S02_13B, S03_07, S04_04, S10_03, S10_06A, S10_06B Science (scorer reliability less than 70%)

LITHUANIA
M09_08, M09_09 Mathematics (printing error in Booklet 8 only)
S06_12 Science (translation error)

MONGOLIA
M02_08A, M02_08B, M02_08C, M02_08D, M03_08A, M03_08B, M03_08C Mathematics (administered without manipulatives)
M08_04B Mathematics (erroneous application of scoring guide)
S04_11, S06_13A, S06_13B, S08_09A, S11_06, S14_10B, S14_12 Science (erroneous application of scoring guide)
S05_02A, S05_02B Science (scorer reliability less than 70%)
S10_04 Science (negative discrimination)

MOROCCO
M10_09, M12_13B Mathematics (scorer reliability less than 70%)

QATAR
S07_10 Science (negative discrimination)

SWEDEN
S04_04, S08_09B Science (scorer reliability less than 70%)
APPENDIX C: COUNTRY ADAPTATIONS TO ITEMS AND ITEM SCORING

TUNISIA

M08_03 Mathematics (poor discrimination)
S04_14 Science (negative discrimination)
S07_10 Science (poor discrimination)
S08_08 Science (too few valid responses)

**Constructed-response items needing category recoding**

**ALL COUNTRIES**

M02_11, M03_10 Mathematics (recode 11 to 70)
M04_09A Mathematics (recode 11 to 71)
M08_08 Mathematics (recode 20 to 10, 10 to 70)
M09_12 Mathematics (recode 20 to 10, 10 to 71)
M13_01C Mathematics (recode 21 to 12)
S06_03 Science (recode 20 to 10, 10 to 79)
S06_04 Science (recode 11 to 70)
S06_06 Science (recode 19 to 70)
S06_12, S06_13A, S06_13B Science (recode 19 to 10)
S08_09A Science (recode 11 to 10)
S09_08 Science (recode 20 to 10 and 10, 11, 12 to 79)
S09_10 Science (recode 19 to 10)
S10_10 Science (recode 13 to 11)
S11_04 Science (recode 19 to 79)
S11_06 Science (recode 70 to 79)
S12_09 Science (recode 70 to 11)
S13_04 (recode 19 to 10)
S13_10 Science (recode 71 to 70)
S14_06 Science (recode 21 to 10 and 10, 11, 70 to 79)
S14_10A Science (recode 19 to 10, 11 to 79)
S14_10B Science (recode 19 to 79)
S14_10A and S14_10B combined to form S14_10D, a new 2-point item, as follows:
If S14_10A=10 and S14_10B=10 or 11, S14_10D → 20.
If S14_10A=10 or S14_10B=10 or 11, S14_10D → 10.
Otherwise, S14_10D → 70.
Eighth Grade

Items deleted

ALL COUNTRIES
M02_15 Mathematics (poor discrimination)
S03_08 Science (poor discrimination)
S06_12C Science (faulty scoring guide)
S10_16, S14_13 Science (faulty distracters)

ALGERIA
M02_04 Mathematics (negative discrimination)
M04_05B Mathematics (scorer reliability less than 70%)
S14_07 Science (negative discrimination)

BAHRAIN
S08_09 Science (negative discrimination)

BASQUE COUNTRY, SPAIN
M02_04 Mathematics (negative discrimination)

BOSNIA AND HERZEGOVINA
M10_12B Mathematics (negative discrimination)

BOTSWANA
M07_03, M09_02, M09_10 Mathematics (negative discrimination)
S01_01, S08_10 Science (poor discrimination)
S11_09 Science (negative discrimination)

BULGARIA
S13_12, S14_02 Science (scorer reliability less than 70%)

CHINESE TAIPEI
S04_09 Science (scorer reliability less than 70%)
S09_07 Science (negative discrimination)

COLOMBIA
M11_13A Mathematics (too few valid responses)
Appendix C: Country Adaptations to Items and Item Scoring

CYPRUS
M09_13 Mathematics (erroneous application of scoring guide)

EGYPT
S08_09 Science (negative discrimination)

GEORGIA
M07_06, M12_13 Mathematics (negative discrimination)
S09_02 Science (poor discrimination)
S10_17, S14_02 Science (scorer reliability less than 70%)

GHANA
S01_01 Science (poor discrimination)
S06_02, S10_03, S11_09 Science (negative discrimination)

INDONESIA
S11_09 Science (poor discrimination)

ITALY
M03_10 Mathematics (poor discrimination)
S14_04A, S14_04C Science (scorer reliability less than 70%)

JAPAN
S10_17, S13_03, S13_12 Science (scorer reliability less than 70%)

JORDAN
M13_08 Mathematics (negative discrimination)

KOREA, REP. OF
S08_04 Science (negative discrimination)

KUWAIT
M04_07 Mathematics (negative discrimination)
S08_09 Science (negative discrimination)

LEBANON
S04_11C Science (negative discrimination)

MINNESOTA, US
S09_07 Science (negative discrimination)
MONGOLIA
M03_10, M06_13, M11_08 Mathematics (poor discrimination)
M05_07C Mathematics (erroneous application of scoring guide)
M08_12 Mathematics (negative discrimination)
S04_11B, S05_08, S06_03, S06_07 Science (erroneous application of scoring guide)
S06_08 Science (poor discrimination)
S07_08, S10_07 Science (negative discrimination)
S10_06, S10_09, S10_10, S10_12, S10_17 Science (scorer reliability less than 70%)

MOROCCO
M02_04, M04_13 Mathematics (negative discrimination)
S01_06, S03_12, S04_04, S10_09, S10_12, S11_04 Science (scorer reliability less than 70%)
S08_09, S09_07 Science (negative discrimination)

NORWAY
M02_02 Mathematics (printing error in Booklet 2 only)
S11_10 Science (too few valid responses in Booklets 1-14 only)

OMAN
S07_08 Science (poor discrimination)

PALESTINIAN NAT’L AUTH.
M05_06 Mathematics (printing error)
M07_03, M13_08 Mathematics (negative discrimination)
S06_02 Science (poor discrimination)
S07_08, S08_09 Science (negative discrimination)

QATAR
S06_02, S07_10 Science (poor discrimination)
S10_06 Science (translation error)

ROMANIA
M12_14 Mathematics (negative discrimination)

SAUDI ARABIA
S08_09 Science (negative discrimination)
APPENDIX C: COUNTRY ADAPTATIONS TO ITEMS AND ITEM SCORING

SERBIA
M10_12B Mathematics (negative discrimination)
S08_04 Science (poor discrimination)

SWEDEN
M10_08 Mathematics (negative discrimination)
S11_10 Science (too few valid responses in Booklets 1-14 only)

SYRIAN ARAB REPUBLIC
M07_03 Mathematics (negative discrimination)
S14_07 Science (negative discrimination)

THAILAND
S08_04 Science (negative discrimination)

TUNISIA
M11_02 Mathematics (translation error in Booklets 1-14 only)
S04_04, S10_17 Science (scorer reliability less than 70%)

UKRAINE
S04_04 Science (scorer reliability less than 70%)

Constructed-response items needing category recoding

ALL COUNTRIES
M04_12A Mathematics (recode 11 to 70, 70 to 71)
M05_05 Mathematics (recode 20 to 10, 10 to 70)
M08_05 Mathematics (recode 11 to 70)
S01_08B Science (recode 20 to 11, 29 to 19)
S04_06 Science (recode 12 to 71)
S05_14B Science (recode 71 to 12, 72 to 71)
S06_07 Science (recode 10 to 20, 11 to 10, 70 to 11)
S07_11 Science (recode 20 to 10, 29 to 19, 10 to 12)
S08_12 Science (recode 20 to 10, 21 to 11, 29 to 19, 10 to 12)
S08_13 Science (recode 20 to 10, 10 to 70, 11 to 71)
S09_10B Science (recode 20 to 10, 29 to 19, 10 to 12)
S10_10 Science (recode 11 to 70, 70 to 71)
S12_12 Science (recode 11 to 70)
S14_02 Science (recode 21 to 20, 11 to 10)
S14_05 Science (recode 20 to 10, 21 to 11, 10 to 12)
Country Adaptations to Bridge Items and Bridge Item Scoring

Fourth Grade

Items deleted

ALL COUNTRIES
S02_08 Science (deleted in TIMSS 2003)

ARMENIA
S01_03, S01_04 Science (deleted in TIMSS 2003)
S11_04 Science (trend difference greater than two logits)

CHINESE TAIPEI
M05_10 Mathematics (scorer reliability less than 70%)

HUNGARY
M09_06A, M09_06B Mathematics (too few valid responses)
M14_06 Mathematics (deleted in TIMSS 2003)
S10_02 Science (deleted in TIMSS 2003)

IRAN, ISLAMIC REP. OF
S05_02 Science (trend difference greater than two logits)
S05_06 Science (deleted in TIMSS 2003)

LITHUANIA
M12_06C Mathematics (deleted in TIMSS 2003)

MOROCCO
M11_10 Mathematics (deleted in TIMSS 2003)

NETHERLANDS
S13_03 Science (deleted in TIMSS 2003)

TUNISIA
S05_06 Science (deleted in TIMSS 2003)
Eighth Grade

Items deleted

ALL COUNTRIES
M06_07, M06_11, M06_12, M06_13 Mathematics (calculator item in TIMSS 2003)

ARMENIA
S13_10 Science (erroneous application of scoring guide)

BAHRAIN
M10_10 Mathematics (poor discrimination)

BOTSWANA
M02_14 Mathematics (negative discrimination)
S02_01, S05_01 Science (deleted in TIMSS 2003)

CYPRUS
S02_01 Science (negative discrimination)

EGYPT
M01_12 Mathematics (deleted in TIMSS 2003)
S09_13, S14_01 Science (deleted in TIMSS 2003)

GHANA
M01_01 Mathematics (deleted in TIMSS 2003 in Booklet 12 (B4 in TIMSS 2007 only))
M01_05, M01_12, M01_14, M02_06, M02_07, M02_12, M02_14, M02_15, M05_09, M09_05, M09_10, M10_02, M10_03, M10_04, M10_05, M11_02, M11_05, M11_06, M11_10, M11_12, M12_04, M12_05, M12_09, M12_10, M13_02, M13_04, M13_05, M13_06, M13_09, M13_10, M13_11, M14_01, M14_05, M14_09 Mathematics (deleted in TIMSS 2003)
M02_04 Mathematics (negative discrimination)
M10_10 Mathematics (poor discrimination)
M12_03 Mathematics (not administered in TIMSS 2003)
S01_03, S09_03 Science (deleted in TIMSS 2003)
S09_06, S09_13 Science (negative discrimination)
HONG KONG SAR
S01_01, S11_05 Science (negative discrimination)

HUNGARY
S01_13 Science (negative discrimination)

INDONESIA
M02_04 Mathematics (deleted in TIMSS 2003)
M10_10 Mathematics (poor discrimination)
S01_08, S05_01 Science (negative discrimination)

IRAN, ISLAMIC REP. OF
S10_09A Science (negative discrimination)

ISRAEL
S09_06, S11_07 Science (negative discrimination)

ITALY
S10_10B Science (poor discrimination)

JAPAN
S01_09 Science (scorer reliability less than 70%)
S10_06 Science (poor discrimination)

JORDAN
M09_01, M14_02 Mathematics (deleted in TIMSS 2003)
S09_05, S09_06 Science (deleted in TIMSS 2003)

KOREA, REP. OF
S02_11 Science (deleted in TIMSS 2003)
S11_07 Science (negative discrimination)

LEBANON
M01_06 Mathematics (deleted in TIMSS 2003)

LITHUANIA
M02_14 Mathematics (translation error)
M13_08 Mathematics (negative discrimination)
S14_09 Science (deleted in TIMSS 2003)
MALAYSIA
M10_02 Mathematics (trend difference greater than two logits)

MOROCCO
S01_08, S01_12 Science (deleted in TIMSS 2003)
S01_11, S13_06, S14_03 Science (negative discrimination)

NORWAY
M13_08 Mathematics (negative discrimination)
M13_10 Mathematics (poor discrimination)

PALESTINIAN NAT’L AUTH.
S01_06, S01_16, S09_05, S09_06 Science (deleted in TIMSS 2003)

QUEBEC, CANADA
M05_08 Mathematics (deleted in TIMSS 2003)

ROMANIA
M01_05, M01_07, M01_14 Mathematics (printing error in B4 only)
M01_09, M10_07, M10_08, M10_09, M10_11, M12_01, M12_10, M12_12,
M12_13A, M12_13B, M12_13C, M14_03, M14_04A, M14_04B, M14_04C,
M14_05, M14_06 Mathematics (printing error)
M02_03, M02_04, M02_05, M02_08, M02_09, M02_11, M12_04, M12_05,
M12_08 Mathematics (printing error in Hungarian version only)
M12_11 Mathematics (deleted in TIMSS 2003)
S01_07 Science (trend difference greater than two logits)
S01_08 Science (printing error in B4 only)
S01_10 Science (printing error in Hungarian B4 only)
S05_11, S05_13, S06_05, S06_06 Science (printing error in Hungarian
version only)
S06_08 Science (printing error in Hungarian B3 only)
S10_04, S10_09A, S10_09B, S10_10A, S10_10B, S12_11, S14_08A, S14_08B
Science (printing error)

SINGAPORE
M11_09 Mathematics (trend difference greater than two logits)

SLOVENIA
M10_09 Mathematics (too few valid responses)
S14_08B, S14_09 Science (deleted in TIMSS 2003)
TUNISIA
M11_06, M12_13A Mathematics (trend difference greater than two logits)
S01_06, S05_01, S09_11, S10_01 Science (negative discrimination)
S09_13 Science (poor discrimination)
S13_01 Science (deleted in TIMSS 2003)

Constructed-response items needing category recoding

ALL COUNTRIES
M13_14 Mathematics (recode 20 to 10, 10 to 70)
S09_03 Science (recode 20 to 10, 29 to 19, 10 to 12)
S10_06 Science (recode 20 to 10, 21 to 11, 22 to 12, 29 to 19, 10 to 71, 11 to 72, 19 to 79)
S13_10 Science (recode 20 to 10, 29 to 19, 10 to 70, 19 to 79, 70 to 71, 71 to 72)