

# APPENDIX B

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# CHANGES MADE TO THE TIMSS INTERNATIONAL DATABASE FOR THE POPULATION 2 COGNITIVE ITEMS

## ***ITEMS DELETED IN INDIVIDUAL COUNTRIES***

### **All Countries**

M09 (Staircase graph)

### **Austria**

M05 Mathematics (Geometric Figure Half Turn)

### **Belgium (FR)**

N05 Science (Cause Acid Rain)

### **Colombia**

O12 (Composition of Earth)

### **Cyprus**

F03 Science (Humans Interpret Senses)

H01 Science (Not Function Blood)

J01 Science (Describe Surface Earth Billions Years)

J07 Science (Warm-blooded Animals Differ Cold-Blooded Animals)

O11 Science (Which Chemical Change)

Q15 Science (Chemical Change)

### **Denmark**

N16 Mathematics (Jan's Bag of Marbles)

### **France**

N05 Science (Cause Acid Rain)

### **Greece**

Q16 (Light from star)

### **Hungary**

L17 Mathematics (Subtracting Fractions)

Q09 Mathematics (Add and Multiply Fractions)

Z01B & Z01C Science (Painting the Bridge)

### **Iceland**

O04 Mathematics (Round Nearest Hundredth)

Q17 Science (Advantage Two Eyes)

### **Indonesia**

A03 Mathematics (Actual length of box)

D10 Mathematics (Cost of printing greeting cards)

E01 Mathematics (Graph distance and time of hike)

J14 Mathematics (Divide with decimals)

J17 Mathematics (Map of Oxford and Smithville)

- M04 Mathematics (Which number largest?)
- N11 Mathematics (Rounding number of trees planted in park)
- N17 Mathematics (Fuel in tank of car)
- P17 Mathematics (Table of temperatures)
- A12 Science (Fast moving river)
- I11 Science (Features of all insects)
- J01 Science (Surface of earth over billions of years)
- M11 Science (Food web)
- W01A Science (Good place farming)

**Iran**

- F04 Science (Wash Away Soil)
- N09 Science (Filtration)

**Israel**

- B05 (Which feature is located) dropped for booklet 1 only.

**Japan**

- J11 Math (Angles in parallelogram)
- N17 Math (Car consumes fuel)
- U02A and U02B (Drawing in grid)

**Kuwait**

- D10 Mathematics (Cost Greeting Cards)
- F07 Mathematics (Average Speed Runner)
- I01 Mathematics (Whole Numbers Add to 81)
- J05 Science (Solar Radiation Sunburn)
- J18 Mathematics (Table x and y)
- O04 Mathematics (Round Nearest Hundredth)

**Latvia**

- E12 Science (Caves in Limestone)

**Lithuania**

- F11 Mathematics (4 Times Number 48,  $\frac{1}{3}$  Number)

**Mexico**

- J1 Science (Describe Surface Earth Billions Years)

**Philippines**

- I03 Mathematics (Number 750mL Bottles from 600 L Water)
- J02 Science (Species on Earth Shortest Time)

**Romania**

- A03 Mathematics (Length Box Nearest Centimeter)

**Singapore**

- U02A and U02B (Drawig in grid)

**Slovak Republic**

K10 Science (How Does Air Exist)

**Thailand**

K04 Mathematics ( $X/2 < 7$ )

P04 Science (When animal hibernates)

Q16 Science (Light Nearest Star)

**United States**

I13 Science (Best Thermometer Body Temperature)

**OPTIONS RELABELED IN ITEMS****Greece**

N08 Science (Girls Balance on Seesaw): Options A and B are switched and options C and D are switched

**Indonesia**

B10 Mathematics (Which smallest number): Options B and D should be switched

M02 Mathematics (Lines of symmetry for rectangle): Options A and C should be switched

**Korea**

B02 Science (Chemical Energy Released Car): Options B and C are switched

C02 Mathematics (Graph Distribution of Crops): Options C and D are switched

P12 Mathematics (Mark's Garden): Options B and C are switched, Options A and D are switched

**Latvia**

C01 Mathematics (Stack Blocks Different Volume): Options A and B are switched

K01 Mathematics (Same Fraction Shaded): Options C and D are switched

M02 Mathematics (Diagram Lines of Symmetry Rectangle): Options A and C are switched and options B and D are switched

**FREE-RESPONSE ITEM RECODING****Science****K10 (How Air Exists)**

Categories 70 and 71 should both = 70. Training team found it difficult to distinguish between these categories.

**L04 (Two Machines) -- Only 20s have positive PB, so recode:**

20 = 10, 21 = 11, 29 = 19

10 = 74, 11 = 75, 12 = 76, and 19 = 79

**M11 (Food Web) -- Only 30s have positive PB, so recode:**

10 to 13 = 71

20 to 25 = 72

30 = 10 and 31 = 11

**Y01 (Energy in a Lamp) -- Only 20s have positive PB, so recode:**

20 = 10, 21 = 11, 22 = 12, 29 = 19

10 = 73, 11 = 74, 19 = 75

**Y02 (Warming Snowballs) -- Typo in category 21 in coding guide, so recode:**

21 = 19

**J03 (Molecules)**

19=10

**M12 (Use Ammemeter)**

19=10

**O14 (Sun and Moon)**

20 -> 10 ; 29 -> 19 ; 10 -> 72 ; 11 -> 73 ; 19 -> 74 due to e-mail from Ina

**Q18 (Melting Ice)**

19=10 and 29=20

***Mathematics***

**L16 (Solve for X)**

19=10

**M06 (Ratio Boys/Girls)**

19=10

**M08 (Decimal Multip.)**

19=10

**Q10 (Degrees of Angle)**

19=10

**R13 (Spent Fraction Total Money)**

Recode Category 74 = 79. Category 74 has error in guide (28 instead of 280). This does leave gap in response range 70 to 73, 75, 79.

**S01A (Congruence... )**

19=10

**S02A (Area of Figure )**

19=10

**T01A (Apples in Box )**

29=20

**T02A (Pattern boxes )**

19=10

**U01A (Estimate time)**

19=10

**U02A (Draw Rectangle)**

19=10 and 29=20

**U02B (Draw Rectangle)**

19=10 and 29=20

***ITEMS THAT COUNTRIES HAVE DELETED OR OMITTED***

**France**

V01 Mathematics : weight of Dolphin (had translation problem)

**Russia**

I19 Science -- Table Oxygen in Pond