

APPENDIX B - TIMSS TEST BLUEPRINTS

Table B.1 Population 1 Mathematics Blueprint: Time Allocations in Minutes by Content Grouping and Performance Category

Content grouping	Performance Category						Total minutes
	Knowing	Routine procedures	Complex procedures	Solving problems	Justifying and proving	Communicating	
Whole numbers: place value	6	2	2	3	3	0	16
Whole numbers: other content	4	5	2	0	0	0	11
Decimal fractions: meaning, representation and operations	3	2	0	3	0	0	8
Common fractions: meaning, representation and operations	4	0	1	1	0	3	9
Proportionality	1	0	4	1	0	6	12
Estimation and number sense	2	0	4	1	0	0	7
Measurement	5	6	0	4	0	0	15
Data analysis	3	0	8	3	0	0	14
Probability	0	0	1	1	0	0	2
Geometry	9	0	4	0	0	1	14
Patterns, relations, and functions	5	1	0	4	0	0	10
Total minutes	42	16	26	21	3	10	118

Table B.2 Population 1 Science Blueprint: Time Allocations in Minutes by Content Grouping and Performance Category

Content grouping	Performance Category				Total minutes
	Understanding	Theorizing, analyzing, and solving problems	Using tools, routine procedures, and science processes	Investigating the natural world	
Earth features	6	5	0	1	12
Earth science: other content	5	3	1	0	9
Human biology	12	2	0	0	14
Life science: other content	31	1	1	0	33
Physical science	19	13	3	1	36
Environment	9	0	0	0	9
Other content	2	0	1	1	4
Total minutes	84	24	6	3	117

Table B.3 Population 2 Mathematics Blueprint: Time Allocations in Minutes by Content Grouping and Performance Category

Content grouping	Performance Category						Total minutes
	Knowing	Routine procedures	Complex procedures	Solving problems	Justifying and proving	Communicating	
Common fractions: meaning, representation	7	0	3	0	0	0	10
Common fractions: operations, relations and proportions	1	5	2	9	0	0	17
Decimal fractions	3	7	2	5	0	0	17
Estimation and number sense	2	4	6	8	0	0	20
Congruence and similarity	2	2	1	1	0	0	6
Other geometry	3	4	6	5	0	0	18
Linear equations	3	2	1	8	0	0	14
Other algebra	5	10	0	4	5	0	24
Data representation and analysis	2	2	8	2	0	5	19
Probability	1	0	1	5	0	0	7
Measurement	6	3	6	9	0	5	29
Proportionality	0	5	0	7	5	0	17
Total minutes	35	44	36	63	10	10	198

Table B.4 Population 2 Science Blueprint: Time Allocations in Minutes by Content Grouping and Performance Category

Content grouping	Performance Category				Total minutes
	Understanding	Theorizing, analyzing, and solving problems	Using tools, routine procedures, and science processes	Investigating the natural world	
Earth features	10	5	1	0	16
Earth science: other content	6	9	2	0	17
Human biology	12	3	0	5	20
Life science: other content	32	7	1	1	41
Energy types etc.	5	10	0	0	15
Light	7	7	0	0	14
Physics: other content	16	13	1	2	32
Chemistry	16	9	1	0	26
Environment	5	5	0	0	10
Other content	3	3	2	2	10
Total minutes	112	71	8	10	201

Table B.5 Population 3 Mathematics Literacy Blueprint: Time Allocation in Minutes by Content Grouping and Performance Category

Content grouping	Performance Category				Total minutes
	Knowing	Routine procedures	Complex procedures	Solving problems	
Number sense	1	10	1	5	17
Algebraic sense	5	1	0	3	9
Measurement and estimation	3	1	5	10	19
Reasoning and social utility	0	0	2	13	15
Total minutes	9	12	8	31	60

Table B.6 Population 3 Science Literacy Blueprint: Time Allocation in Minutes by Content Grouping and Performance Category

Content grouping	Performance Category				Total minutes
	Understanding	Theorizing, analyzing, and solving problems	Using tools, routine procedures, and science processes	Investigating the natural world	
Earth science	1	8	0	0	9
Human biology	9	2	0	0	11
Other life science	3	0	2	1	6
Energy	3	5	0	0	8
Other physical science	5	6	0	0	11
Reasoning and social utility	4	7	5	0	16
Total minutes	25	28	7	1	61

Table B.7 Population 3 Advanced Mathematics Blueprint: Time Allocation in Minutes by Content Grouping and Performance Category

Content grouping	Performance Category						Total minutes
	Knowing	Routine procedures	Complex procedures	Solving problems	Justifying and proving	Communicating	
Numbers, equations and functions	3	18	6	25	0	3	55
Analysis (calculus)	6	24	0	14	0	3	47
Geometry	15	18	9	20	10	5	77
Probability and statistics	3	6	3	9	0	0	21
Validation and structure	0	3	0	0	8	0	11
Total minutes	27	69	18	68	18	11	211

Table B.8 Population 3 Physics Blueprint: Time Allocation in Minutes by Content Grouping and Performance Category

Content grouping	Performance Category				Total minutes
	Understanding	Theorizing, analyzing, and solving problems	Using tools, routine procedures, and science processes	Investigating the natural world	
Forces and motion	3	30	12	5	50
Electricity and magnetism	12	39	3	0	54
Thermal and wave phenomena	12	12	3	0	27
Particle physics and relativity	12	15	0	5	32
Energy	12	27	6	3	48
Total minutes	51	123	24	13	211