TIMSS

Supplement
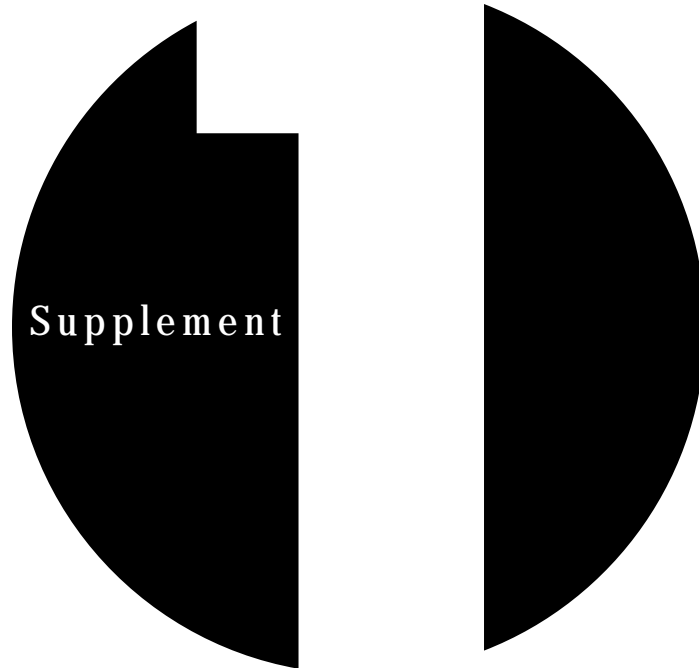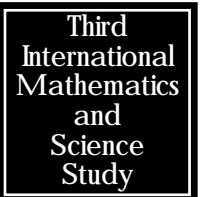
International Versions of the Background Questionnaires

Population 1

User Guide for the TIMSS International Database

International Database

Primary and Middle School Years – 1995 Assessment

Third International Mathematics and Science Study

Supplement 1
International Versions of the Background Questionnaires – Population 1

Overview

This supplement contains the international versions of the Population 1 background questionnaires in the following three sections:

Section 1:   Student Background Questionnaire (SQ1)

Section 2:   Teacher Background Questionnaire (TQ1)

Section 3:   School Background Questionnaire (SCQ1)

Table S1.1
Index of International Background Variables for the Population 1 Student Questionnaire Items

Questionnaire Location	Variable Name	Description
SQ1-1/1	ASBGBIRD	On what date were you born (day)?
SQ1-1/2	ASBGBIRM	On what date were you born (month)?
SQ1-1/3	ASBGBIRY	On what date were you born (year)?
SQ1-2	ASBGSEX	Are you a girl or a boy?
SQ1-3A	ASBGBRN1	Were you born in <country>?
SQ1-3B	ASBGBRN2	How old were you when you came to <country>?
SQ1-4	ASBGLANG	How often do you speak <language of test> at home?
SQ1-5A	ASBMEXTR	Outside of school do you ever have extra lessons in mathematics?
SQ1-5B	ASBSEXTR	Outside of school do you ever have extra lessons in science?
SQ1-5C	ASBGCLUB	Outside of school do you ever participate in science or mathematics clubs?
SQ1-6A	ASBGDAY1	On a normal school day, how much time do you spend watching television and videos?
SQ1-6B	ASBGDAY2	On a normal school day, how much time do you spend playing computer games?
SQ1-6C	ASBGDAY3	On a normal school day, how much time do you spend playing/talking w/friends outside school?
SQ1-6D	ASBGDAY4	On a normal school day, how much time do you spend doing jobs at home?
SQ1-6E	ASBGDAY5	On a normal school day, how much time do you spend playing sports?
SQ1-6F	ASBGDAY6	On a normal school day, how much time do you spend reading a book for enjoyment?
SQ1-6G	ASBMDAY7	On a normal school day, how much time do you spend studying mathematics or doing mathematics homework?
SQ1-6H	ASBSDAY8	On a normal school day, how much time do you spend studying science or doing science homework?
SQ1-6I	ASBGDAY9	How much time/day do you spend studying or doing homework for classes besides mathematics and science?
SQ1-7A	ASBGADU1	Does your mother live at home with you?
SQ1-7B	ASBGADU2	Does your father live at home with you?
SQ1-7C	ASBGADU3	Do any brothers live at home with you?
SQ1-7D	ASBGADU4	Do any sisters live at home with you?
SQ1-7E	ASBGADU5	Do you have a stepmother who lives with you?
SQ1-7F	ASBGADU6	Do you have a stepfather who lives with you?
SQ1-7G	ASBGADU7	Do any grandparents live at home with you?
SQ1-7H	ASBGADU8	Do any other relatives live at home with you?
SQ1-7I	ASBGADU9	Do any non-relatives live at home with you?
SQ1-8	ASBGHOME	Altogether, how many people live in your home?
SQ1-9A	ASBGBRNM	Was your mother born in <country>?
SQ1-9B	ASBGBRNF	Was your father born in <country>?
SQ1-10	ASBGBOOK	About how many books are there in your home?
SQ1-11A	ASBGPS01	Do you have a calculator at your home?
SQ1-11B	ASBGPS02	Do you have a computer at your home?
SQ1-11C	ASBGPS03	Do you have a study desk at home for your own use?
SQ1-11D	ASBGPS04	Do you have a dictionary at your home?
SQ1-11E	ASBGPS05	Do you have a <country specific> at your home?
SQ1-11F	ASBGPS06	Do you have a <country specific> at your home?
SQ1-11G	ASBGPS07	Do you have a <country specific> at your home?
SQ1-11H	ASBGPS08	Do you have a <country specific> at your home?
SQ1-11I	ASBGPS09	Do you have a <country specific> at your home?
SQ1-11J	ASBGPS10	Do you have a <country specific> at your home?
SQ1-11K	ASBGPS11	Do you have a <country specific> at your home?
SQ1-11L	ASBGPS12	Do you have a <country specific> at your home?
SQ1-11M	ASBGPS13	Do you have a <country specific> at your home?
SQ1-11N	ASBGPS14	Do you have a <country specific> at your home?

Table S1.1
Index of International Background Variables for the Population 1 Student Questionnaire Items (Continued)

Questionnaire Location	Variable Name	Description
SQ1-11O	ASBGPS15	Do you have a <country specific> at your home?
SQ1-11P	ASBGPS16	Do you have a <country specific> at your home?
SQ1-12A	ASBSMIP1	Does your mother think it is important for you to do well in science at school?
SQ1-12B	ASBMMIP2	Does your mother think it is important for you to do well in mathematics at school?
SQ1-12C	ASBGMIP3	Does your mother think it is important for you to be good at sports?
SQ1-12D	ASBGMIP4	Does your mother think it is important for you to have time to have fun?
SQ1-13A	ASBSFIP1	Do most of your friends think it is important for you to do well in science at school?
SQ1-13B	ASBMFIP2	Do most of your friends think it is important for you to do well in mathematics at school?
SQ1-13C	ASBGFIP3	Do most of your friends think it is important for you to be good at sports?
SQ1-13D	ASBGFIP4	Do most of your friends think it is important for you to have time to have fun?
SQ1-14A	ASBSSIP1	Do you think it is important for you to do well in science at school?
SQ1-14B	ASBMSIP2	Do you think it is important for you to do well in mathematics at school?
SQ1-14C	ASBGSIP3	Do you think it is important for you to be good at sports?
SQ1-14D	ASBGSIP4	Do you think it is important for you to have time to have fun?
SQ1-15A	ASBMGOOD	I usually do well in mathematics
SQ1-15B	ASBSGOOD	I usually do well in science.
SQ1-16A	ASBGSSTL	In the last month, was something of yours stolen?
SQ1-16B	ASBGSHRT	In the last month, did you think another student might hurt you?
SQ1-16C	ASBGFSTL	In the last month, was something stolen from a friend of yours?
SQ1-16D	ASBGFHRT	In the last month, did any of your friends think another student might hurt them?
SQ1-17A	ASBMDOW1	To do well in mathematics, you need lots of natural ability.
SQ1-17B	ASBMDOW2	To do well in mathematics, you need good luck.
SQ1-17C	ASBMDOW3	To do well in mathematics, you need lots of hard work studying at home.
SQ1-17D	ASBMDOW4	To do well in mathematics, you need to memorize the textbook or notes.
SQ1-18A	ASBSDOW1	To do well in science you need lots of natural ability.
SQ1-18B	ASBSDOW2	To do well in science you need good luck.
SQ1-18C	ASBSDOW3	To do well in science you need lots of hard work studying at home.
SQ1-18D	ASBSDOW4	To do well in science you need to memorize the textbook or notes.
SQ1-19A	ASBMLIKE	How much do you like mathematics?
SQ1-19B	ASBSLIKE	How much do you like science?
SQ1-20A	ASBMCMLK	How much do you like using computers in mathematics?
SQ1-20B	ASBSCMLK	How much do you like using computers in science?
SQ1-21A	ASBMENJY	Do you think that you enjoy learning mathematics?
SQ1-21B	ASBMBORE	Do you think that mathematics is boring?
SQ1-21C	ASBMEASY	Do you think that mathematics is an easy subject?
SQ1-21D	ASBSENJY	Do you think that you enjoy learning science?
SQ1-21E	ASBSBORE	Do you think that science is boring?
SQ1-21F	ASBSEASY	Do you think that science is an easy subject?
SQ1-22A	ASBMPROB	How often does the teacher show how to do mathematics problems in your mathematics lesson?
SQ1-22B	ASBMNOTE	How often do you copy notes from the board in your mathematics lesson?
SQ1-22C	ASBMTEST	How often do you have a quiz or test in your mathematics lesson?
SQ1-22D	ASBMWSHT	How often do you work from worksheets or textbooks alone in your mathematics lesson?
SQ1-22E	ASBMPROJ	How often do you work on mathematics projects in your mathematics lesson?
SQ1-22F	ASBMCALC	How often do you use calculators in your mathematics lesson?
SQ1-22G	ASBMCOMP	How often do you use computers in your mathematics lesson?
SQ1-22H	ASBMSGRP	How often do you work together in pairs or small groups in your mathematics lesson?

Table S1.1
Index of International Background Variables for the Population 1 Student Questionnaire Items (Continued 2)

Questionnaire Location	Variable Name	Description
SQ1-22M	ASBMHWFC	How often do you check each other's homework in your mathematics lesson?
SQ1-22N	ASBMHWDS	How often do you discuss completed homework in your mathematics lesson?
SQ1-23A	ASBSPROB	How often does the teacher show how to do science problems in your science lesson?
SQ1-23B	ASBSNOTE	How often do you copy notes from the board in your science lesson?
SQ1-23C	ASBSTEST	How often do you have a quiz or test in your science lesson?
SQ1-23D	ASBSPROJ	How often do you work on science projects in your science lesson?
SQ1-23E	ASBSWSHT	How often do you work from worksheets or textbooks alone in your science lesson?
SQ1-23F	ASBSCALC	How often do you use calculators in your science lesson?
SQ1-23G	ASBSCOMP	How often do you use computers in your science lesson?
SQ1-23H	ASBSEVLF	How often do you use things from life to solve problems in your science lesson?
SQ1-23I	ASBSSGRP	How often do you work together in pairs or small groups in your science lesson?
SQ1-23J	ASBSHWGV	How often does the teacher give homework in your science lesson?
SQ1-23K	ASBSHWCL	How often do you begin homework in class in your science lesson?
SQ1-23L	ASBSHWTC	How often does the teacher check homework in your science lesson?
SQ1-23M	ASBSHWFC	How often do you check each other's homework in your science lesson?
SQ1-23N	ASBSHWDS	How often do you discuss completed homework in your science lesson?
SQ1-23O	ASBSDEMO	How often does the teacher demonstrate an experiment in your science lesson?
SQ1-23P	ASBSEXPR	How often do you do an experiment in your science lesson?
SQ1-24A	ASBGACT1	How often do you read a book or magazine?
SQ1-24B	ASBGACT2	How often do you visit a museum or art exhibition?
SQ1-24C	ASBGACT3	How often do you attend a concert?
SQ1-24D	ASBGACT4	How often do you go to the theatre?
SQ1-24E	ASBGACT5	How often do you go to the movies
SQ1-25A	ASBGNEWS	How often do you watch news or documentaries on television or video?
SQ1-25B	ASBGOPER	How often do you watch opera, ballet, or classical music programs on television or video?
SQ1-25C	ASBGNATR	How often do you watch nature, wildlife, or history programs on television or video?
SQ1-25D	ASBGPOPU	How often do you watch popular music programs on television or video?
SQ1-25E	ASBGSPRT	How often do you watch sports programs on television or video?
SQ1-25F	ASBGVIDE	How often do you watch video games on television or video?
SQ1-25G	ASBGCRTN	How often do you watch cartoons on television or video?
SQ1-25H	ASBGCMDY	How often do you watch comedy, adventure, or suspense programs on television or video?

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued)

Questionnaire Location	Variable Name	Description
TQ1-8J	ATBGGR8	Have you taught at the 8th grade level in the past five years?
TQ1-8K	ATBGGR9	Have you taught at the 9th grade level in the past five years?
TQ1-8L	ATBGGR10	Have you taught at the 10th grade level in the past five years?
TQ1-8M	ATBGGR11	Have you taught at the 11th grade level in the past five years?
TQ1-8N	ATBGGR12	Have you taught at the 12th grade level in the past five years?
TQ1-8O	ATBGGR13	Have you taught at the 13th grade level in the past five years?
TQ1-9A	ATBGACT1	How many hours outside the school day do you spend per week preparing or grading exams?
TQ1-9B	ATBGACT2	How many hours outside the school day do you spend per week grading other work?
TQ1-9C	ATBGACT3	How many hours outside the school day do you spend per week planning lessons?
TQ1-9D	ATBGACT4	How many hours outside the school day do you spend per week meeting with students?
TQ1-9E	ATBGACT5	How many hours outside the school day do you spend per week meeting with parents?
TQ1-9F	ATBGACT6	How many hours outside the school day do you spend per week in professional development?
TQ1-9G	ATBGACT7	How many hours outside the school day do you spend per week keeping records?
TQ1-9H	ATBGACT8	How many hours outside the school day do you spend per week on administrative tasks?
TQ1-10	ATBGMEET	How often do you meet with other teachers to discuss curriculum or teaching issues?
TQ1-11A	ATBMIMP1	To be good in math, how important is it to remember formulas and procedures?
TQ1-11B	ATBMIMP2	To be good in math, how important is it to think in a sequential & procedural manner?
TQ1-11C	ATBMIMP3	To be good in math, how important is it to understand mathematical concepts?
TQ1-11D	ATBMIMP4	To be good in math, how important is it to think creatively?
TQ1-11E	ATBMIMP5	To be good in math, how important is it to understand real world use?
TQ1-11F	ATBMIMP6	To be good in math, how important is it to be able to provide reasons to support solutions?
TQ1-12A	ATBMAGR1	Mathematics is primarily an abstract subject.
TQ1-12B	ATBMAGR2	Mathematics is primarily a formal way of representing the real world.
TQ1-12C	ATBMAGR3	Mathematics is primarily a practical and structured guide for addressing real situations.
TQ1-12D	ATBGAGR4	If students have difficulty, give them more practice by themselves in class.
TQ1-12E	ATBMAGR5	Some students have a natural talent for mathematics and others do not.
TQ1-12F	ATBMAGR6	More than one representation should be used in teaching a mathematics topic.
TQ1-12G	ATBMAGR7	Mathematics should be learned as sets of algorithms that cover all possibilities.
TQ1-12H	ATBMAGR8	Basic computational skills are sufficient for teaching <primary school> mathematics.
TQ1-12I	ATBMAGR9	A liking for and understanding of students are essential for teaching mathematics.
TQ1-13A	ATBMFAM1	How familiar are you with the <national curriculum guide for mathematics>?
TQ1-13B	ATBSFAM2	How familiar are you with the <national curriculum guide for science>?
TQ1-13C	ATBGFAM3	How familiar are you with the <regional curriculum guide>?
TQ1-13D	ATBGFAM4	How familiar are you with the <school curriculum guide>?
TQ1-13E	ATBGFAM5	How familiar are you with the <national examination specifications>?
TQ1-13F	ATBGFAM6	How familiar are you with the <regional examination specifications>?
TQ1-13G	ATBMFAM7	How familiar are you with the <national pedagogy guide for mathematics>?
TQ1-13H	ATBSFAM8	How familiar are you with the <national pedagogy guide for science>?
TQ1-14A	ATBGBOY	How many boys are in your class?
TQ1-14B	ATBGGIRL	How many girls are in your class?
TQ1-15A	ATBGACH1	What percent of your students are in the top third nationally?
TQ1-15B	ATBGACH2	What percent of your students are in the middle third nationally?
TQ1-15C	ATBGACH3	What percent of your students are in the bottom third nationally?
TQ1-16	ATBMTIME	How many minutes per week do you teach mathematics to your class?
TQ1-17	ATBMTXBK	Do you use a textbook in teaching mathematics to your class?
TQ1-17/1A	ATBMTXB0	Do you use <text> in your class?

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 2)

Questionnaire Location	Variable Name	Description
TQ1-17/1B	ATBMTXB1	Do you use <text> in your class?
TQ1-17/1C	ATBMTXB2	Do you use <text> in your class?
TQ1-17/1D	ATBMTXB3	Do you use <text> in your class?
TQ1-17/1E	ATBMTXB4	Do you use <text> in your class?
TQ1-17/1F	ATBMTXB5	Do you use <text> in your class?
TQ1-17/1G	ATBMTXB6	Do you use <text> in your class?
TQ1-17/1H	ATBMTXB7	Do you use <text> in your class?
TQ1-17/1I	ATBMTXB8	Do you use <text> in your class?
TQ1-17/1J	ATBMTXB9	Do you use <text> in your class?
TQ1-17/2	ATBMTXNM	Name of textbook:
TQ1-18	ATBMTXBS	What percentage of your teaching time is based on the text?
TQ1-19	ATBMDIVC	Do you divide your class into groups for teaching mathematics?
TQ1-20A	ATBGLM01	Is your teaching limited by students with different academic abilities?
TQ1-20B	ATBGLM02	Is your teaching limited by students from a wide range of backgrounds?
TQ1-20C	ATBGLM03	Is your teaching limited by students with special needs?
TQ1-20D	ATBGLM04	Is your teaching limited by uninterested students?
TQ1-20E	ATBGLM05	Is your teaching limited by disruptive students?
TQ1-20F	ATBGLM06	Is your teaching limited by parents interested in their children's progress?
TQ1-20G	ATBGLM07	Is your teaching limited by parents uninterested in their children's progress?
TQ1-20H	ATBGLM08	Is your teaching limited by shortage of computer hardware?
TQ1-20I	ATBGLM09	Is your teaching limited by shortage of computer software?
TQ1-20J	ATBGLM10	Is your teaching limited by shortage of other instructional equipment for student use?
TQ1-20K	ATBGLM11	Is your teaching limited by shortage of equipment for demonstrations?
TQ1-20L	ATBGLM12	Is your teaching limited by inadequate physical facilities?
TQ1-20M	ATBGLM13	Is your teaching limited by high student/teacher ratio?
TQ1-20N	ATBGLM14	Is your teaching limited by low morale among fellow teachers/administrators?
TQ1-20O	ATBGLM15	Is your teaching limited by low morale among students?
TQ1-20P	ATBGLM16	Is your teaching limited by threats to personal safety or students' safety?
TQ1-21	ATBMCALC	How many of your students have access to calculators during mathematics lessons?
TQ1-22A	ATBGCAL1	How often do your students use calculators for checking answers?
TQ1-22B	ATBGCAL2	How often do your students use calculators for tests?
TQ1-22C	ATBGCAL3	How often do your students use calculators for routine computation?
TQ1-22D	ATBGCAL4	How often do your students use calculators for solving complex problems?
TQ1-22E	ATBGCAL5	How often do your students use calculators for exploring number concepts?
TQ1-23A	ATBMRLY1	In planning mathematics lessons, how much do you rely on previously prepared lessons?
TQ1-23B	ATBMRLY2	In planning mathematics lessons, how much do you rely on a plan made by teachers in the school?
TQ1-23C	ATBMRLY3	In planning mathematics lessons, how much do you rely on other specialists in your school?
TQ1-23D	ATBMRLY4	In planning mathematics lessons, how much do you rely on student textbooks?
TQ1-23E	ATBMRLY5	In planning mathematics lessons, how much do you rely on other resource books?
TQ1-23F	ATBMRLY6	In planning mathematics lessons, how much do you rely on teacher guides?
TQ1-23G	ATBMRLY7	In planning mathematics lessons, how much do you rely on external examinations?
TQ1-24A	ATBMSRC1	What is your main source when deciding which topics to teach?
TQ1-24B	ATBMSRC2	What is your main source when deciding how to present a topic?
TQ1-24C	ATBMSRC3	What is your main source when selecting practice exercises?
TQ1-24D	ATBMSRC4	What is your main source when selecting exercises for assessment?
TQ1-25A	ATBMTA	How many periods have you spent teaching whole numbers this year?

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 3)

Questionnaire Location	Variable Name	Description
TQ1-25AA	ATBMTAA	Will teach whole numbers later this year.
TQ1-25AB	ATBMTAB	Whole numbers are not taught this year.
TQ1-25AC	ATBMTAC	Whole numbers were taught in a previous year.
TQ1-25A1	ATBMTA1	How many periods have you spent teaching place values this year?
TQ1-25A1A	ATBMTA1A	Will teach place values later this year.
TQ1-25A1B	ATBMTA1B	Place values are not taught this year.
TQ1-25A1C	ATBMTA1C	Place values were taught in a previous year.
TQ1-25A2	ATBMTA2	How many periods have you spent teaching whole number meanings this year?
TQ1-25A2A	ATBMTA2A	Will teach whole number meanings later this year.
TQ1-25A2B	ATBMTA2B	Whole number meanings are not taught this year.
TQ1-25A2C	ATBMTA2C	Whole number meanings were taught in a previous year.
TQ1-25B	ATBMTB	How many periods have you spent teaching fractions this year?
TQ1-25BA	ATBMTBA	Will teach fractions later this year.
TQ1-25BB	ATBMTBB	Fractions are not taught this year.
TQ1-25BC	ATBMTBC	Fractions were taught in a previous year.
TQ1-25B1	ATBMTB1	How many periods have you spent teaching decimal fractions/meaning this year?
TQ1-25B1A	ATBMTB1A	Will teach decimal fractions/meaning later this year.
TQ1-25B1B	ATBMTB1B	Decimal fractions/meaning are not taught this year.
TQ1-25B1C	ATBMTB1C	Decimal fractions/meaning were taught in a previous year.
TQ1-25B2	ATBMTB2	How many periods have you spent teaching decimal fractions/operations this year?
TQ1-25B2A	ATBMTB2A	Will teach decimal fractions/operations later this year.
TQ1-25B2B	ATBMTB2B	Decimal fractions/operations are not taught this year.
TQ1-25B2C	ATBMTB2C	Decimal fractions/operation were taught in a previous year.
TQ1-25B3	ATBMTB3	How many periods have you spent teaching decimal fractions/properties this year?
TQ1-25B3A	ATBMTB3A	Will teach decimal fractions/properties later this year.
TQ1-25B3B	ATBMTB3B	Decimal fractions/properties are not taught this year.
TQ1-25B3C	ATBMTB3C	Decimal fractions/properties were taught in a previous year.
TQ1-25B4	ATBMTB4	How many periods have you spent teaching common fractions/meaning this year?
TQ1-25B4A	ATBMTB4A	Will teach common fractions/meaning later this year.
TQ1-25B4B	ATBMTB4B	Common fractions/meaning are not taught this year.
TQ1-25B4C	ATBMTB4C	Common fractions/meaning were taught in a previous year.
TQ1-25B5	ATBMTB5	How many periods have you spent teaching common fractions/operations this year?
TQ1-25B5A	ATBMTB5A	Will teach common fractions/operations later this year.
TQ1-25B5B	ATBMTB5B	Common fractions/operations are not taught this year.
TQ1-25B5C	ATBMTB5C	Common fractions/operations were taught in a previous year.
TQ1-25B6	ATBMTB6	How many periods have you spent teaching common fractions/properties this year?
TQ1-25B6A	ATBMTB6A	Will teach common fractions/properties later this year.
TQ1-25B6B	ATBMTB6B	Common fractions/properties are not taught this year.
TQ1-25B6C	ATBMTB6C	Common fractions/properties were taught in a previous year.
TQ1-25B7	ATBMTB7	How many periods have you spent teaching relat. bet. common & dec. fractions this year?
TQ1-25B7A	ATBMTB7A	Will teach relat. bet. common & dec. fractions later this year.
TQ1-25B7B	ATBMTB7B	

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 4)

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 5)

Questionnaire Location	Variable Name	Description
TQ1-25MA	ATBMTMA	Will teach 3D geometry later this year.
TQ1-25MB	ATBMTMB	3D geometry is not taught this year.
TQ1-25MC	ATBMTMC	3D geometry was taught in a previous year.
TQ1-25N	ATBMTN	How many periods have you spent teaching ratio and proportions this year?
TQ1-25NA	ATBMTNA	Will teach ratio and proportions later this year.
TQ1-25NB	ATBMTNB	Ratio and proportions are not taught this year.
TQ1-25NC	ATBMTNC	Ratio and proportions were taught in a previous year.
TQ1-25N1	ATBMTN1	How many periods have you spent teaching ratio concepts this year?
TQ1-25N1A	ATBMTN1A	Will teach ratio concepts later this year.
TQ1-25N1B	ATBMTN1B	Ratio concepts are not taught this year.
TQ1-25N1C	ATBMTN1C	Ratio concepts were taught in a previous year.
TQ1-25N2	ATBMTN2	How many periods have you spent teaching ratio applications this year?
TQ1-25N2A	ATBMTN2A	Will teach ratio applications later this year.
TQ1-25N2B	ATBMTN2B	Ratio applications are not taught this year.
TQ1-25N2C	ATBMTN2C	Ratio applications were taught in a previous year.
TQ1-25O	ATBMTO	How many periods have you spent teaching functions,relations,& patterns this year?
TQ1-25OA	ATBMTOA	Will teach functions,relations,& patterns later this year.
TQ1-25OB	ATBMTOB	Functions,relations,& patterns are not taught this year.
TQ1-25OC	ATBMTOC	Functions,relations,& patterns were taught in a previous year.
TQ1-25P	ATBMTP	How many periods have you spent teaching equations & formulas this year?
TQ1-25PA	ATBMTPA	Will teach equations & formulas later this year.
TQ1-25PB	ATBMTPB	Equations & formulas are not taught this year.
TQ1-25PC	ATBMTPC	Equations & formulas were taught in a previous year.
TQ1-25P1	ATBMTP1	How many periods have you spent teaching linear equations this year?
TQ1-25P1A	ATBMTP1A	Will teach linear equations later this year.
TQ1-25P1B	ATBMTP1B	Linear equations are not taught this year.
TQ1-25P1C	ATBMTP1C	Linear equations were taught in a previous year.
TQ1-25P2	ATBMTP2	How many periods have you spent teaching other equations this year?
TQ1-25P2A	ATBMTP2A	Will teach other equations later this year.
TQ1-25P2B	ATBMTP2B	Other equations are not taught this year.
TQ1-25P2C	ATBMTP2C	Other equations were taught in a previous year.
TQ1-25Q	ATBMTQ	How many periods have you spent teaching statistics this year?
TQ1-25QA	ATBMTQA	Will teach statistics later this year.
TQ1-25QB	ATBMTQB	Statistics are not taught this year.
TQ1-25QC	ATBMTQC	Statistics were taught in a previous year.
TQ1-25R	ATBMTR	How many periods have you spent teaching probability this year?
TQ1-25RA	ATBMTRA	Will teach probability later this year.
TQ1-25RB	ATBMTRB	Probability is not taught this year.
TQ1-25RC	ATBMTRC	Probability was taught in a previous year.
TQ1-25S	ATBMTS	How many periods have you spent teaching sets and logic this year?
TQ1-25SA	ATBMTSA	Will teach sets and logic later this year.
TQ1-25SB	ATBMTSB	Sets and logic are not taught this year.
TQ1-25SC	ATBMTSC	Sets and logic were taught in a previous year.
TQ1-25T	ATBMTT	How many periods have you spent teaching problem solving this year?
TQ1-25TA	ATBMTTA	Will teach problem solving later this year.
TQ1-25TB	ATBMTTB	Problem solving is not taught this year.

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 6)

Questionnaire Location	Variable Name	Description
TQ1-25TC	ATBMTTC	Problem solving was taught in a previous year.
TQ1-25U	ATBMTU	How many periods have you spent teaching other mathematicscontent this year?
TQ1-25UA	ATBMTUA	Will teach other mathematicscontent later this year.
TQ1-25UB	ATBMTUB	Other mathematicscontent is not taught this year.
TQ1-25UC	ATBMTUC	Other mathematicscontent was taught in a previous year.
TQ1-26A	ATBMCLTM	How many minutes was the last mathematics lesson you taught to your class?
TQ1-26B01	ATBMTO01	Was whole numbers the subject of the lesson?
TQ1-26B02	ATBMTO02	Was common fractions the subject of the lesson?
TQ1-26B03	ATBMTO03	Was decimal fractions the subject of the lesson?
TQ1-26B04	ATBMTO04	Were percentages the subject of the lesson?
TQ1-26B05	ATBMTO05	Were other number sets and concepts the subject of the lesson?
TQ1-26B06	ATBMTO06	Was number theory the subject of the lesson?
TQ1-26B07	ATBMTO07	Was estimation and number sense the subject of the lesson?
TQ1-26B08	ATBMTO08	Was measurement units and processes the subject of the lesson?
TQ1-26B09	ATBMTO09	Was perimeter, area, and volume the subject of the lesson?
TQ1-26B10	ATBMTO10	Were basics of one and two dimensional geometry the subject of the lesson?
TQ1-26B11	ATBMTO11	Was geometric congruence and similarity the subject of the lesson?
TQ1-26B12	ATBMTO12	Was geometric transformation and symmetry the subject of the lesson?
TQ1-26B13	ATBMTO13	Was three dimensional geometry and constructions the subject of the lesson?
TQ1-26B14	ATBMTO14	

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 7)

Questionnaire Location	Variable Name	Description
TQ1-27AH2	ATBMTM08	How long did students spend on pencil-and-paper exercises?
TQ1-27AI1	ATBMOR09	In what order did you assign homework?
TQ1-27AI2	ATBMTM09	How long did you spend assigning homework?
TQ1-27AJ1	ATBMOR10	In what order did you allow students to work on homework in class?
TQ1-27AJ2	ATBMTM10	How long did students spend on homework in class?
TQ1-27AK1	ATBMOR11	In what order did you have a student laboratory activity?
TQ1-27AK2	ATBMTM11	How long did students spend on a laboratory activity?
TQ1-27B	ATBMSGRP	Did the students work in small groups?
TQ1-28A	ATBMASK1	In your mathematicslessons, how often do you ask students to explain reasoning behind an idea?
TQ1-28B	ATBMASK2	In your mathematicslessons, how often do you ask students to use tables, charts, or graphs?
TQ1-28C	ATBMASK3	How often do you ask students to work on problems with no obvious method of solution?
TQ1-28D	ATBMASK4	

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 8)

Questionnaire Location	Variable Name	Description
TQ1-35B	ATBSNTMW	If science is not a separate subject, how many minutes per week are spent on science?
TQ1-36A	ATBSLES1	In science lessons, how often do students work individually without assistance?
TQ1-36B	ATBSLES2	In science lessons, how often do students work individually with assistance?
TQ1-36C	ATBSLES3	In science lessons, how often do students work as a class with teacher leading?
TQ1-36D	ATBSLES4	In science lessons, how often do students work as a class with students responding to each other?
TQ1-36E	ATBSLES5	In science lessons, how often do students work in pairs without assistance?
TQ1-36F	ATBSLES6	In science lessons, how often do students work in pairs with assistance?
TQ1-37A	ATBSTA	How many periods have you spent teaching earth features this year?
TQ1-37AA	ATBSTAA	Will teach earth features later this year.
TQ1-37AB	ATBSTAB	Earth features are not taught this year.
TQ1-37AC	ATBSTAC	Earth features were taught in a previous year.
TQ1-37A1	ATBSTA1	How many periods have you spent teaching earth features/layers this year?
TQ1-37A1A	ATBSTA1A	Will teach earth features/layers later this year.
TQ1-37A1B	ATBSTA1B	Earth features/layers are not taught this year.
TQ1-37A1C	ATBSTA1C	Earth features/layers were taught in a previous year.
TQ1-37A2	ATBSTA2	How many periods have you spent teaching earth features/landforms this year?
TQ1-37A2A	ATBSTA2A	Will teach earth features/landforms later this year.
TQ1-37A2B	ATBSTA2B	Earth features/landforms are not taught this year.
TQ1-37A2C	ATBSTA2C	Earth features/landforms were taught in a previous year.
TQ1-37A3	ATBSTA3	How many periods have you spent teaching earth features/bodies of water this year?
TQ1-37A3A	ATBSTA3A	Will teach earth features/bodies of water later this year.
TQ1-37A3B	ATBSTA3B	Earth features/bodies of water are not taught this year.
TQ1-37A3C	ATBSTA3C	Earth features/bodies of water were taught in a previous year.
TQ1-37A4	ATBSTA4	How many periods have you spent teaching earth features/atmosphere this year?
TQ1-37A4A	ATBSTA4A	Will teach earth features/atmosphere later this year.
TQ1-37A4B	ATBSTA4B	Earth features/atmosphere is not taught this year.
TQ1-37A4C	ATBSTA4C	Earth features/atmosphere was taught in a previous year.
TQ1-37A5	ATBSTA5	How many periods have you spent teaching earth features/rocks,soil this year?
TQ1-37A5A	ATBSTA5A	Will teach earth features/rocks,soil later this year.
TQ1-37A5B	ATBSTA5B	Earth features/rocks,soil are not taught this year.
TQ1-37A5C	ATBSTA5C	Earth features/rocks,soil were taught in a previous year.
TQ1-37A6	ATBSTA6	How many periods have you spent teaching earth features/iceforms this year?
TQ1-37A6A	ATBSTA6A	Will teach earth features/iceforms later this year.
TQ1-37A6B	ATBSTA6B	Earth features/iceforms are not taught this year.
TQ1-37A6C	ATBSTA6C	Earth features/iceforms were taught in a previous year.
TQ1-37B	ATBSTB	How many periods have you spent teaching weather this year?
TQ1-37BA	ATBSTBA	Will teach weather later this year.
TQ1-37BB	ATBSTBB	Weather is not taught this year.
TQ1-37BC	ATBSTBC	Weather was taught in a previous year.
TQ1-37C	ATBSTC	How many periods have you spent teaching earth processes this year?
TQ1-37CA	ATBSTCA	Will teach earth processes later this year.
TQ1-37CB	ATBSTCB	Earth processes are not taught this year.
TQ1-37CC	ATBSTCC	Earth processes were taught in a previous year.
TQ1-37D	ATBSTD	How many periods have you spent teaching historic earth processes this year?
TQ1-37DA	ATBSTDA	Will teach historic earth processes later this year.
TQ1-37DB	ATBSTDB	Historic earth processes are not taught this year.

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 9)

Questionnaire Location	Variable Name	Description
TQ1-37DC	ATBSTDC	Historic earth processes were taught in a previous year.
TQ1-37E	ATBSTE	How many periods have you spent teaching about earth in the universe this year?
TQ1-37EA	ATBSTEA	Will teach earth in the universe later this year.
TQ1-37EB	ATBSTEB	Earth in the universe is not taught this year.
TQ1-37EC	ATBSTEC	Earth in the universe was taught in a previous year.
TQ1-37F	ATBSTF	How many periods have you spent teaching diversity of living things this year?
TQ1-37FA	ATBSTFA	Will teach diversity of living things later this year.
TQ1-37FB	ATBSTFB	Diversity of living things is not taught this year.
TQ1-37FC	ATBSTFC	Diversity of living things was taught in a previous year.
TQ1-37G	ATBSTG	How many periods have you spent teaching human health this year?
TQ1-37GA	ATBSTGA	Will teach human health later this year.
TQ1-37GB	ATBSTGB	Human health is not taught this year.
TQ1-37GC	ATBSTGC	Human health was taught in a previous year.
TQ1-37H	ATBSTH	How many periods have you spent teaching human biology this year?
TQ1-37HA	ATBSTHA	Will teach human biology later this year.
TQ1-37HB	ATBSTHB	Human biology is not taught this year.
TQ1-37HC	ATBSTHC	Human biology was taught in a previous year.
TQ1-37H1	ATBSTH1	How many periods have you spent teaching human biology/structures this year?
TQ1-37H1A	ATBSTH1A	Will teach human biology/structures later this year.
TQ1-37H1B		

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 10)

Questionnaire Location	Variable Name	Description
TQ1-37LA	ATBSTLA	Will teach interactions of living things later this year.
TQ1-37LB	ATBSTLB	Interactions of living things are not taught this year.
TQ1-37LC	ATBSTLC	Interactions of living things were taught in a previous year.
TQ1-37M	ATBSTM	How many periods have you spent teaching environmental & resource issues this year?
TQ1-37MA	ATBSTMA	Will teach environmental & resource issues later this year.
TQ1-37MB	ATBSTMB	Environmental & resource issues are not taught this year.
TQ1-37MC	ATBSTMC	Environmental & resource issues were taught in a previous year.
TQ1-37N	ATBSTN	How many periods have you spent teaching animal behavior this year?
TQ1-37NA	ATBSTNA	Will teach animal behavior later this year.
TQ1-37NB	ATBSTNB	Animal behaviors are not taught this year.
TQ1-37NC	ATBSTNC	Animal behaviors were taught in a previous year.
TQ1-37O	ATBSTO	How many periods have you spent teaching about matter this year?
TQ1-37OA	ATBSTOA	Will teach matter later this year.
TQ1-37OB	ATBSTOB	Matter is not taught this year.
TQ1-37OC	ATBSTOC	Matter was taught in a previous year.
TQ1-37P	ATBSTP	How many periods have you spent teaching energy types this year?
TQ1-37PA	ATBSTPA	Will teach energy types later this year.
TQ1-37PB	ATBSTPB	Energy types are not taught this year.
TQ1-37PC	ATBSTPC	Energy types were taught in a previous year.
TQ1-37Q	ATBSTQ	How many periods have you spent teaching energy processes this year?
TQ1-37QA	ATBSTQA	Will teach energy processes later this year.
TQ1-37QB	ATBSTQB	Energy processes are not taught this year.
TQ1-37QC	ATBSTQC	Energy processes were taught in a previous year.
TQ1-37Q1	ATBSTQ1	How many periods have you spent teaching energy processes/light this year?
TQ1-37Q1A	ATBSTQ1A	Will teach energy processes/light later this year.
TQ1-37Q1B	ATBSTQ1B	Energy processes/light are not taught this year.
TQ1-37Q1C	ATBSTQ1C	Energy processes/light were taught in a previous year.
TQ1-37R	ATBSTR	How many periods have you spent teaching physical & chemical changes this year?
TQ1-37RA	ATBSTRA	Will teach physical & chemical changes later this year.
TQ1-37RB	ATBSTRB	Physical & chemical changes are not taught this year.
TQ1-37RC	ATBSTRC	Physical & chemical changes were taught in a previous year.
TQ1-37S	ATBSTS	How many periods have you spent teaching forces and motion this year?
TQ1-37SA	ATBSTSA	Will teach forces and motion later this year.
TQ1-37SB	ATBSTSB	Forces and motion are not taught this year.
TQ1-37SC	ATBSTSC	Forces and motion were taught in a previous year.
TQ1-37T	ATBSTT	How many periods have you spent teaching about science and society this year?
TQ1-37TA	ATBSTTA	Will teach science and society later this year.
TQ1-37TB	ATBSTTB	Science and society is not taught this year.
TQ1-37TC	ATBSTTC	Science and society was taught in a previous year.
TQ1-37U	ATBSTU	How many periods have you spent teaching history of science this year?
TQ1-37UA	ATBSTUA	Will teach history of science later this year.
TQ1-37UB	ATBSTUB	History of science is not taught this year.
TQ1-37UC	ATBSTUC	History of science was taught in a previous year.
TQ1-37V	ATBSTV	How many periods have you spent teaching the nature of science this year?
TQ1-37VA	ATBSTVA	Will teach nature of science later this year.
TQ1-37VB	ATBSTVB	Nature of science is not taught this year.

Table S1.2
Index of International Background Variables for the Population 1 Teacher Questionnaire Items (Continued 11)

Questionnaire Location	Variable Name	Description
TQ1-37VC	ATBSTVC	Nature of science was taught in a previous year.
TQ1-37W1	ATBSTW1	How many periods have you spent teaching measurement/tools this year?

Table S1.3
Index of International Background Variables for the Population 1 School Questionnaire Items

Questionnaire Location	Variable Name	Description
SCQ1-1	ACBGCOMM	In what type of community is your school located?
SCQ1-2A	ACBGGRPK	Does your school serve pre-kindergarten?
SCQ1-2B	ACBGGRK	Does your school serve kindergarten?
SCQ1-2C	ACBGGR1	Does your school serve 1st grade?
SCQ1-2D	ACBGGR2	Does your school serve 2nd grade?
SCQ1-2E	ACBGGR3	Does your school serve 3rd grade?
SCQ1-2F	ACBGGR4	Does your school serve 4th grade?
SCQ1-2G	ACBGGR5	Does your school serve 5th grade?
SCQ1-2H	ACBGGR6	Does your school serve 6th grade?
SCQ1-2I	ACBGGR7	Does your school serve 7th grade?
SCQ1-2J	ACBGGR8	Does your school serve 8th grade?
SCQ1-2K	ACBGGR9	Does your school serve 9th grade?
SCQ1-2L	ACBGGR10	Does your school serve 10th grade?
SCQ1-2M	ACBGGR11	Does your school serve 11th grade?
SCQ1-2N	ACBGGR12	Does your school serve 12th grade?
SCQ1-2O	ACBGGR13	Does your school serve 13th grade?
SCQ1-3A	ACBGFTE1	How many principals are on the staff of your school? (in FTE)
SCQ1-3B	ACBGFTE2	How many assistant principals are on the staff of your school? (in FTE)
SCQ1-3C	ACBGFTE3	How many classroom teachers are on the staff of your school? (in FTE)
SCQ1-3D	ACBGFTE4	How many teacher aides are on the staff of your school? (in FTE)
SCQ1-3E	ACBGFTE5	How many other professional staff members are on the staff of your school? (in FTE)
SCQ1-4A	ACBGFTTE	How many individual full-time classroom teachers are there in your school?
SCQ1-4B	ACBGPTTE	How many individual part-time classroom teachers are there in your school?
SCQ1-5	ACBGTE5Y	What percentage of the classroom teachers have been at your school for 5 or more years?
SCQ1-6A	ACBMTEAC	What percentage of the classroom teachers teach 3/4 + of teaching load in mathematics?
SCQ1-6B	ACBMNONE	What percentage of the classroom teachers teach no mathematics?
SCQ1-6C	ACBSTEAC	What percentage of the classroom teachers teach 3/4 + of teaching load in science?
SCQ1-6D	ACBSNONE	What percentage of the classroom teachers teach no science?
SCQ1-6E	ACBGTEAC	What percentage of the classroom teachers teach 3/4 + of load in mathematics and science?
SCQ1-6F	ACBGNONE	What percentage of the classroom teachers teach no mathematics or science?
SCQ1-7	ACBGSAME	How long do students typically stay with the same teacher?
SCQ1-8A	ACBMRELW	How many hours during the school week do teachers have for tasks related to teaching mathematics?
SCQ1-8B	ACBMTEAW	How many hours during the school week do teachers have for teaching mathematics?
SCQ1-8C	ACBSRELW	How many hours during the school week do teachers have for tasks related to teaching science?
SCQ1-8D	ACBSTEAW	How many hours during the school week do teachers have for teaching science?
SCQ1-9A	ACBGCOL1	Does your school have policy promoting cooperation & collaboration among teachers?
SCQ1-9B	ACBGCOL2	Are teachers encouraged to share and discuss instructional ideas and materials?
SCQ1-9C	ACBGCOL3	Do teachers in your school meet regularly to discuss instructional goals & issues?
SCQ1-10A	ACBGAC01	As principal, how many hours per month do you spend on hiring teachers?

Table S1.3
Index of International Background Variables for the Population 1 School Questionnaire Items (Continued)

Questionnaire Location	Variable Name	Description
SCQ1-10I	ACBGAC09	As principal, how many hours per month do you spend on talking with parents?
SCQ1-10J	ACBGAC10	As principal, how many hours per month do you spend on counseling/disciplining students?
SCQ1-10K	ACBGAC11	As principal how many hours per month do you spend responding to requests from district, state, nat'l officials?
SCQ1-10L	ACBGAC12	As principal, how many hours per month do you spend on training teachers?
SCQ1-10M	ACBGAC13	As principal, how many hours per month do you spend on professional development activities?
SCQ1-10N	ACBGAC14	As principal, how many hours per month do you spend on other activities?
SCQ1-11A	ACBGRP01	In your school, who has primary responsibility for hiring teachers?
SCQ1-11B	ACBGRP02	In your school, who has primary responsibility for establishing disciplinary policies?
SCQ1-11C	ACBGRP03	In your school, who has primary responsibility for establishing student grading policies?
SCQ1-11D	ACBGRP04	In your school, who has primary responsibility for formulating the school budget?
SCQ1-11E	ACBGRP05	In your school, who has primary responsibility for purchasing supplies?
SCQ1-11F	ACBGRP06	In your school, who has primary responsibility for placing students in classes?
SCQ1-11G	ACBGRP07	In your school, who has primary responsibility for assigning teachers to classes?
SCQ1-11H	ACBGRP08	In your school, who has primary responsibility for choosing textbooks?
SCQ1-11I	ACBGRP09	In your school, who has primary responsibility for establishing homework policies?
SCQ1-11J	ACBGRP10	In your school, who has primary responsibility for determining teacher salaries?
SCQ1-11K	ACBGRP11	In your school, who has primary responsibility for establishing community relationships?
SCQ1-11L	ACBGRP12	In your school, who has primary responsibility for communicating with students' families?
SCQ1-11M	ACBGRP13	In your school, who has primary responsibility for determining course content?
SCQ1-11N	ACBGRP14	In your school, who has primary responsibility for determining course offerings?
SCQ1-12A	ACBGIF01	How much influence does the <National Curriculum Council> have in determining curriculum?
SCQ1-12B	ACBGIF02	How much influence does the <National Subject Association> have in determining curriculum?
SCQ1-12C	ACBGIF03	How much influence does the <educational district> have in determining curriculum?
SCQ1-12D	ACBGIF04	How much influence does the <school governing board> have in determining curriculum?
SCQ1-12E	ACBGIF05	How much influence does the principal/head of school have in determining curriculum?
SCQ1-12F	ACBGIF06	How much influence do teachers collectively have in determining curriculum?
SCQ1-12G	ACBGIF07	How much influence do teachers of a subject have in determining curriculum?
SCQ1-12H	ACBGIF08	How much influence do individual teachers have in determining curriculum?
SCQ1-12I	ACBGIF09	How much influence do parents have in determining curriculum?
SCQ1-12J	ACBGIF10	How much influence do students have in determining curriculum?
SCQ1-12K	ACBGIF11	How much influence do church/religious groups have in determining curriculum?
SCQ1-12L	ACBGIF12	How much influence does business community have in determining curriculum?
SCQ1-12M	ACBGIF13	How much influence do textbook publishers have in determining curriculum?
SCQ1-12N	ACBGIF14	How much influence do external exams/standardized tests have in determining curriculum?
SCQ1-12O	ACBGIF15	How much influence do teacher unions have in determining curriculum?
SCQ1-13A	ACBMCURR	Does your school have its own written statement of the mathematics content to be taught?
SCQ1-13B	ACBSCURR	Does your school have its own written statement of the science content to be taught?
SCQ1-14A	ACBGCOM1	In your school, how many computers are available for use by teachers or students?
SCQ1-14B	ACBGCOM2	In your school, how many computers are used by teachers for administrative purposes?
SCQ1-14C	ACBGCOM3	In your school, how many computers are used by teachers during instructional time?
SCQ1-14D	ACBGCOM4	In your school, how many computers are used by students for educational purposes?
SCQ1-14E	ACBGCOM5	In your school, how many computers are used by office staff for record keeping?
SCQ1-15A	ACBGST01	Is your school's instructional capacity affected by inadequacy of instructional materials?
SCQ1-15B	ACBGST02	Is your school's instructional capacity affected by inadequacy of budget for supplies?
SCQ1-15C	ACBGST03	Is your school's instructional capacity affected by inadequacy of school buildings and grounds?
SCQ1-15D	ACBGST04	Is your school's instructional capacity affected by inadequacy of heating/cooling and lighting system?

Table S1.3
Index of International Background Variables for the Population 1 School Questionnaire Items (Continued 2)

| Questionnaire Location	Variable Name	Description
SCQ1-15E	ACBGST05	Is your school's instructional capacity affected by inadequacy of instructional space?
SCQ1-15F	ACBGST06	Is your school's instructional capacity affected by inadequacy of equipment for handicapped students?
SCQ1-15G	ACBMST07	Is your school's instructional capacity affected by inadequacy of computers for mathematics instruction?
SCQ1-15H	ACBMST08	Is your school's instructional capacity affected by inadequacy of computer software for mathematics instruction?
SCQ1-15I	ACBMST09	Is your school's instructional capacity affected by inadequacy of calculators for mathematics instruction?
SCQ1-15J	ACBMST10	Is your school's instructional capacity affected by inadequacy of library materials relevant to mathematics instruction?
SCQ1-15K	ACBMST11	Is your school's instructional capacity affected by inadequacy of A-V resources for mathematics instruction?
SCQ1-15L	ACBSST12	Is your school's instructional capacity affected by inadequacy of science laboratory equipment & materials?
SCQ1-15M	ACBSST13	Is your school's instructional capacity affected by inadequacy of computers for science instruction?
SCQ1-15N	ACBSST14	Is your school's instructional capacity affected by inadequacy of computer software for science instruction?
SCQ1-15O	ACBSST15	Is your school's instructional capacity affected by inadequacy of calculators for science instruction?
SCQ1-15P	ACBSST16	Is your school's instructional capacity affected by inadequacy of library materials relevant to science instruction?
SCQ1-15Q	ACBSST17	Is your school's instructional capacity affected by inadequacy of A-V resources for science instruction?
SCQ1-16A1	ACBGBENR	How many boys attend your school?
SCQ1-16A2	ACBGGENR	How many girls attend your school?
SCQ1-16B	ACBGABST	What percentage of students are absent on a typical day?
SCQ1-16C	ACBGENDY	What percentage of students who begin the year in your school also finish in your school?
SCQ1-16D	ACBGTNSF	What percentage of students in your school transfer in after beginning of school year?
SCQ1-16E1	ACBGLBER	How many boys are in lower grade?
SCQ1-16E2	ACBGLGER	How many girls are in lower grade?
SCQ1-16F1	ACBGLBRT	How many boys in lower grade are repeating the grade?
SCQ1-16F2	ACBGLGRT	How many girls in lower grade are repeating the grade?
SCQ1-16G	ACBGLSIZ	What is the approximate average class size in lower grade?
SCQ1-16H	ACBGLMGR	How many lower grade students are in multi-grade classrooms?
SCQ1-16I1	ACBMLBER	How many boys in lower grade study mathematics?
SCQ1-16I2	ACBMLGER	How many girls in lower grade study mathematics?
SCQ1-16J1	ACBSLBER	How many boys in lower grade study science?
SCQ1-16J2	ACBSLGER	How many girls in lower grade study science?
SCQ1-16K1	ACBGUBER	How many boys are in upper grade?
SCQ1-16K2	ACBGUGER	How many girls are in upper grade?
SCQ1-16L1	ACBGUBRT	How many boys in upper grade are repeating the grade?
SCQ1-16L2	ACBGUGRT	How many girls in upper grade are repeating the grade?
SCQ1-16M	ACBGUSIZ	What is the approximate average class size in upper grade?
SCQ1-16N	ACBGUMGR	How many upper grade students are in multi-grade classrooms?
SCQ1-16O1	ACBMUBER	How many boys in upper grade study mathematics?
SCQ1-16O2	ACBMUGER	How many girls in upper grade study mathematic?
SCQ1-16P1	ACBSUBER	How many boys in upper grade study science?
SCQ1-16P2	ACBSUGER	How many girls in upper grade study science?
SCQ1-17A1	ACBGUO01	How often does school administration or staff have to deal with upper grade students arriving late at school?
SCQ1-17A2	ACBGUP01	What percentage of upper grade students arrive late at school?
SCQ1-17B1	ACBGUO02	How often does school administration or staff have to deal with upper grade students' absenteeism without excuse?
SCQ1-17B2	ACBGUP02	What percentage of upper grade students are absent without an excuse?
SCQ1-17C1	ACBGUO03	How often does school administration or staff have to deal with upper grade students skipping class periods?
SCQ1-17C2	ACBGUP03	What percentage of upper grade students skip classes?
SCQ1-17D1	ACBGUO04	How often does school administration or staff have to deal with upper grade students violating the dress code?
SCQ1-17D2	ACBGUP04	What percentage of upper grade students violate the dress code?

Table S1.3
Index of International Background Variables for the Population 1 School Questionnaire Items (Continued 3)

Questionnaire Location	Variable Name	Description
SCQ1-17E1	ACBGUO05	How often does school administration or staff have to deal with classroom disturbance by upper grade students?
SCQ1-17E2	ACBGUP05	What percentage of upper grade students disturb class?
SCQ1-17F1	ACBGUO06	How often does school administration or staff have to deal with cheating by upper grade students?
SCQ1-17F2	ACBGUP06	What percentage of upper grade students cheat?
SCQ1-17G1	ACBGUO07	How often does school administration or staff have to deal with use of profanity by upper grade students?
SCQ1-17G2	ACBGUP07	What percentage of upper grade students use profanity?
SCQ1-17H1	ACBGUO08	How often does school administration or staff have to deal with vandalism by upper grade students?
SCQ1-17H2	ACBGUP08	What percentage of upper grade students have vandalized school property?
SCQ1-17I1	ACBGUO09	How often does school administration or staff have to deal with theft by upper grade students?
SCQ1-17I2	ACBGUP09	What percentage of upper grade students have been involved with theft?
SCQ1-17J1	ACBGUO10	How often does school administration or staff have to deal with intimidation of students by upper grade students?
SCQ1-17J2	ACBGUP10	What percentage of upper grade students have been involved in intimidation of students?
SCQ1-17K1	ACBGUO11	How often does staff have to deal with physical injury to students caused by upper grade students?
SCQ1-17K2	ACBGUP11	What percentage of upper grade students have caused injury to another student?
SCQ1-17L1	ACBGUO12	How often does staff have to deal with intimidation of teachers or staff by upper grade students?
SCQ1-17L2	ACBGUP12	What percentage of upper grade students been involved in intimidation of teachers or staff members?
SCQ1-17M1	ACBGUO13	How often does staff have to deal with physical injury of teachers or staff caused by upper grade students?
SCQ1-17M2	ACBGUP13	What percentage of upper grade students have caused physical injury to a teacher or staff member?
SCQ1-18	ACBGINST	Is instructional time the same for both lower grade and upper grade in your school?
SCQ1-18A1	ACBGLDYY	How many instructional days are in the school year for lower grade?
SCQ1-18A2	ACBGUDYY	How many instructional days are in the school year for upper grade?
SCQ1-18B1	ACBGLFLW	How many full instructional days are in the school week for lower grade?
SCQ1-18B2	ACBGUFLW	How many full instructional days are in the school week for upper grade?
SCQ1-18C1	ACBGLHFW	How many half instructional days are in the school week for lower grade?
SCQ1-18C2	ACBGUHFW	How many half instructional days are in the school week for upper grade?
SCQ1-18D1	ACBGLTHW	How many total hours are in the school week for lower grade?
SCQ1-18D2	ACBGUTHW	How many total hours are in the school week for upper grade?
SCQ1-18E1	ACBGLIHW	How many instructional hours are in the school week for lower grade?
SCQ1-18E2	ACBGUIHW	How many instructional hours are in the school week for upper grade?
SCQ1-19	ACBGDIVI	Is the school week divided into instructional periods?
SCQ1-19A1	ACBGLPDW	How many instructional periods are there in a week for lower grade?
SCQ1-19A2	ACBGUPDW	How many instructional periods are there in a week for upper grade?
SCQ1-19B1	ACBGLTMP	How many minutes is a typical instructional period for lower grade?
SCQ1-19B2	ACBGUTMP	How many minutes is a typical instructional period for upper grade?
SCQ1-20	ACBMRMDL	Does your school provide remedial teaching in mathematics?
SCQ1-20A	ACBMRMD1	For remedial mathematics teaching, are groups formed within regular mathematics classes?
SCQ1-20B	ACBMRMD2	For remedial mathematics.?? teaching, are students withdrawn from regular mathematics classes?
SCQ1-20C	ACBMRMD3	For remedial mathematics teaching, do students receive extra <tuition> before/after school?
SCQ1-20D	ACBMRMD4	For remedial mathematics teaching, is some other method used?
SCQ1-21	ACBSRMDL	Does your school provide remedial teaching in science?
SCQ1-21A	ACBSRMD1	For remedial science teaching, are groups formed within regular science classes?
SCQ1-21B	ACBSRMD2	For remedial science teaching, are students withdrawn from regular science classes?
SCQ1-21C	ACBSRMD3	For remedial science teaching, do students receive extra <tuition> before/after school?
SCQ1-21D	ACBSRMD4	For remedial science teaching, is some other method used?
SCQ1-22	ACBMENRH	Does your school provide special enrichment activities in mathematics?
SCQ1-22A	ACBMENR1	For mathematics enrichment, are groups formed within regular mathematics classes?

Table S1.3
Index of International Background Variables for the Population 1 School Questionnaire Items (Continued 4)

Questionnaire Location	Variable Name	Description
SCQ1-22B	ACBMENR2	For mathematics enrichment, are students withdrawn from regular mathematics classes?
SCQ1-22C	ACBMENR3	For mathematics enrichment, do students receive extra <tuition> before/after school?
SCQ1-22D	ACBMENR4	For mathematics enrichment, is some other method used?
SCQ1-23	ACBSENRH	Does your school provide special enrichment activities in science?
SCQ1-23A	ACBSENR1	For science enrichment, are groups formed within regular science classes?
SCQ1-23B	ACBSENR2	For science enrichment, are students withdrawn from regular science classes?
SCQ1-23C	ACBSENR3	For science enrichment, do students receive extra <tuition> before/after school?
SCQ1-23D	ACBSENR4	For science enrichment, is some other method used?
SCQ1-24	ACBMUSCO	Do all students in upper grade follow the same course of study in mathematics?
SCQ1-24A	ACBMUC1	How many instructional minutes per week are students in upper grade required to spend in mathematics classes?
SCQ1-24B	ACBMUC2	How many instructional weeks per year are students in upper grade required to spend in mathematics classes?
SCQ1-24C	ACBMUC3	How many different courses of study in mathematics are available to upper grade students?
SCQ1-24D1	ACBMUC41	What percentage of upper grade students take the most advanced mathematics course of study?
SCQ1-24D2	ACBMUC42	What percentage of upper grade students take the least advanced mathematics course of study?
SCQ1-24E1	ACBMUC51	How many instructional minutes/week for students in most advanced mathematics course of study?
SCQ1-24E2	ACBMUC52	How many instructional minutes/week for students in least advanced mathematics course of study?
SCQ1-24F1	ACBMUC61	How many instructional weeks/year for students in most advanced mathematics course of study?
SCQ1-24F2	ACBMUC62	How many instructional weeks/year for students in least advanced mathematics course of study?
SCQ1-25A	ACBMUFC1	How important is academic performance in selecting mathematics course of study for student?
SCQ1-25B	ACBMUFC2	How important are standardized tests in selecting mathematics course of study for student?
SCQ1-25C	ACBMUFC3	How important is entrance exam in selecting mathematics course of study for student?
SCQ1-25D	ACBMUFC4	How important is oral exam in selecting mathematics course of study for student?
SCQ1-25E	ACBMUFC5	How important are teacher recommendations in selecting mathematics course of study for student?
SCQ1-25F	ACBMUFC6	How important are parental wishes in selecting mathematics course of study for student?
SCQ1-25G	ACBMUFC7	How important are student wishes in selecting mathematics course of study for student?
SCQ1-25H	ACBMUFC8	How important are curricular requirements in selecting mathematics course of study for student?
SCQ1-26	ACBSUSCO	Do all students in upper grade follow the same course of study in science?
SCQ1-26A	ACBSUC1	How many instructional minutes per week are students in upper grade required to spend in science classes?
SCQ1-26B	ACBSUC2	

Table S1.3
Index of International Background Variables for the Population 1 School Questionnaire Items (Continued 5)

Questionnaire Location	Variable Name	Description
SCQ1-27H	ACBSUFC8	How important are curricular requirements in selecting science course of study for student?
SCQ1-28A	ACBGSTD1	What percent of students in your school come from disadvantaged economic backgrounds?
SCQ1-28B	ACBGSTD2	What percent of students in your school have neither parent educated beyond primary?
SCQ1-28C	ACBGSTD3	What percent of students in your school come from one-parent families?
SCQ1-28D	ACBGSTD4	What percent of students in your school attended preschool?
SCQ1-28E	ACBGSTD5	What percent of students in your school have a first language other than that taught in school?
SCQ1-28F	ACBGSTD6	What percent of students in your school have learning problems?
SCQ1-28G	ACBGSTD7	What percent of students in your school have health problems?
SCQ1-28H	ACBGSTD8	What percent of students in your school have nutrition problems?
SCQ1-29A	ACBGBS01	In admitting students to your school, do you consider residence in a particular area?
SCQ1-29B	ACBGBS02	In admitting students to your school, do you consider student's academic performance?
SCQ1-29C	ACBGBS03	In admitting students to your school, do you consider interview with student?
SCQ1-29D	ACBGBS04	In admitting students to your school, do you consider interview with parent?
SCQ1-29E	ACBGBS05	In admitting students to your school, is preference given to students with siblings in the school?
SCQ1-29F	ACBGBS06	In admitting students to your school, is preference given according to date of application?
SCQ1-29G	ACBGBS07	In admitting students to your school, do you consider recommendations of previous teachers?
SCQ1-29H	ACBGBS08	In admitting students to your school, is preference given to students from a particular school?
SCQ1-29I	ACBGBS09	In admitting students to your school, is preference given to children of former students?
SCQ1-29J	ACBGBS10	In admitting students to your school, do you consider performance on a standardized test?
SCQ1-29K	ACBGBS11	In admitting students to your school, do you consider performance on an entrance exam?
SCQ1-29L	ACBGBS12	In admitting students to your school, do you consider performance on an oral exam?
SCQ1-29M	ACBGBS13	In admitting students to your school, do you consider other factors?

Section 1

Student Background Questionnaire (SQ1)
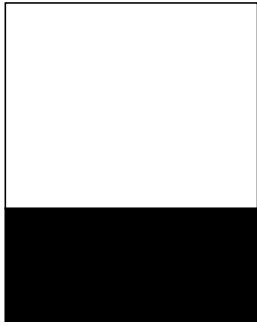
GENERAL DIRECTIONS

In this booklet, you will find questions about yourself. Some questions ask for facts while other questions ask for your opinion.

Read each question carefully and respond as accurately and carefully as possible. You may ask for help if you do not understand something or are not sure how to respond.

Some of the questions will be followed by a few possible choices indicated with a letter next to or below it. For these questions, circle the letter next to or below your choice as shown in Example 1.

Example 1

	Yes	No
1. I attend school	(A)	B

The letter "A" has been circled because you attend school.

If you decide to change your response to a question, put an "X" over your first choice and then put a circle around your new choice as shown in Example 2.

Example 2

	strongly agree	agree	disagree	strongly disagree
1. I like ice cream.	(A)	(B̶)	C	D

For other questions you will be asked to write a number or date in the space provided in your booklet. For these questions, you may use words and numbers in your answers. When you write, please be sure that your handwriting is clear.

2.   Are you a girl or a boy?
Circle either A or B.

girl .... A

boy .... B

3a.   Were you born in <country> ?
Circle either A or B.

Yes .... A

No .... B

5. **Outside of school do you ever...**

Circle either A or B for each line.

	Yes	No
a) have <extra lessons/cramming school> before or after school in math<s>?	A	B
b) have <extra lessons/cramming school> before or after school in science?...	A	B
c) participate in science or math<s> clubs?	A	B

6. **On a normal school day, how much time before or after school do you spend doing each of these things?**

Circle one letter, A, B, C, D, or E, for each line.

	no time	less than 1 hour	1-2 hours	3-4 hours	more than 4 hours
a) watching television and videos	A	B	C	D	E
b) playing computer games	A	B	C	D	E
c) playing or talking with friends outside of school...	A	B	C	D	E
d) doing jobs at home	A	B	C	D	E
e) playing sports	A	B	C	D	E
f) reading a book for enjoyment	A	B	C	D	E
g) studying math<s> or doing math<s> homework after school.............	A	B	C	D	E
h) studying science or doing science homework after school...........................	A	B	C	D	E
i) studying or doing homework in school subjects other than math<s> and science	A	B	C	D	E

7. **Do each of these people live at home with you most or all of the time?**

Circle either A or B for each line.

		Yes	No
a)	mother	A	B
b)	father	A	B
c)	one or more brothers	A	B
d)	one or more sisters	A	B
e)	stepmother	A	B
f)	stepfather	A	B
g)	one or more grandparents	A	B
h)	another relative or relatives such as uncles, aunts, cousins, etc.	A	B
i)	another person or persons (not relatives)	A	B

8. **Altogether, how many people live in your home?**

Write in the total number of people.

_____(Don't forget to include yourself.)

		Yes	No
9a.	**Was your mother born in \<country\>?**...................	A	B
	Circle either A or B.		
9b.	**Was your father born in \<country\>?**	A	B
	Circle either A or B.		

10. About how many books are there in your home?

(Do not count magazines, newspapers, or your school books.)
Circle one letter, A, B, C, D, or E.

none or very few (0 - 10 books) .... A

enough to fill one shelf (11 - 25 books) .... B

enough to fill one bookcase (26 - 100 books) C

enough to fill two bookcases (101 - 200 books) .... D

enough to fill three or more bookcases (more than 200) .... E

---

11. Do you have any of these items at your home?

Circle either A or B for each line.

		Yes	*No*
a) calculator		A	B
b) computer		A	B
c) study desk/table for your use		A	B
d) dictionary		A	B
e) <country-specific>		A	B
f) <country-specific>		A	B
g) <country-specific>		A	B

12. Does your mother think it is important for you to...
Circle either A or B for each line.

	Yes	No
a) do well in science at school?.....................................	A	B
b) do well in math<s> at school?	A	B
c) be good at sports?	A	B
d) have time to have fun?	A	B

13. Do most of your friends think it is important to...
Circle either A or B for each line.

	Yes	No
a) do well in science at school?.....................................	A	B
b) do well in math<s> at school?	A	B
c) be good at sports?	A	B
d) have time to have fun?	A	B

14. Do you think it is important to ...
Circle either A or B for each line.

	Yes	No
a) do well in science at school?.....................................	A	B
b) do well in math<s> at school?	A	B
c) be good at sports?	A	B
d) have time to have fun?	A	B

15. How well do you usually do in math <s> and science at school?
Circle one letter, A, B, C, or D, for each line.

	strongly agree	agree	disagree	strongly disagree
a) I usually do well in math<s>......................	A	B	C	D
b) I usually do well in science.	A	B	C	D

16. Did any of these things happen last month at school?

Circle either A or B for each line.

	Yes	No
a) Something of mine was stolen.	A	B
b) I thought another student might hurt me.	A	B
c) Some of my friends had things stolen.	A	B
d) Some of my friends were hurt by other students.	A	B

17. To do well in math<s> at school you need...

Circle one letter, A, B, C, or D, for each line.

	strongly agree	agree	disagree	strongly disagree
a) lots of natural <talent/ability>.	A	B	C	D
b) good luck.	A	B	C	D
c) lots of hard work studying at home.	A	B	C	D
d) to memorize the textbook or notes.	A	B	C	D

18. To do well in science at school you need...

Circle one letter, A, B C, or D, for each line.

	strongly agree	agree	disagree	strongly disagree
a) lots of natural <talent/ability>.	A	B	C	D
b) good luck.	A	B	C	D
c) lots of hard work studying at home.	A	B	C	D
d) to memorize the textbook or notes.	A	B	C	D

19. How much do you like...

Circle one letter, A, B, C, or D, for each line.

	like a lot	like	dislike	dislike a lot
a) math<s>?	A	B	C	D
b) science?	A	B	C	D

20. How much do you like using computers...

Circle one letter, A, B, C, or D, for each line.

	don't use computers	like a lot	like	dislike	dislike a lot
a) in math<s> lessons?	A	B	C	D	E
b) in science lessons?	A	B	C	D	E

21. What do you think?

Circle one letter, A, B, C, or D, for each line.

	strongly agree	agree	disagree	strongly disagree
a) I enjoy learning math<s>.	A	B	C	D
b) Math<s> is boring.	A	B	C	D
c) Math<s> is an easy subject.	A	B	C	D
d) I enjoy learning science.	A	B	C	D
e) Science is boring.	A	B	C	D
f) Science is an easy subject.	A	B	C	D

22. How often does this happen in your math<s> lessons?

Circle one letter, A, B, or C, for each line.

		most lessons	*some lessons*	*never*
a)	The teacher shows us how to do math<s> problems.	A	B	C
b)	We copy notes from the board.	A	B	C
c)	We have a quiz or test.	A	B	C
d)	We work from worksheets or textbooks on our own.	A	B	C
e)	We work on math<s> projects.	A	B	C
f)	We use calculators.	A	B	C
g)	We use computers.	A	B	C
h)	We work together in pairs or small groups.	A	B	C
i)	We use things from everyday life in solving math<s> problems.	A	B	C
j)	The teacher gives us homework.	A	B	C
k)	We can begin our homework in class.	A	B	C
l)	The teacher checks homework.	A	B	C
m)	We check each other's homework.	A	B	C
n)	We discuss our completed homework.	A	B	C

23. How often does this happen in your science lessons?

Circle one letter, A, B, or C, for each line.

	most lessons	*some lessons*	*never*
a) The teacher shows us how to do science problems.	A	B	C
b) We copy notes from the board.	A	B	C
c) We have a quiz or test.	A	B	C
d) We work on science projects.	A	B	C
e) We work from worksheets or textbooks on our own.	A	B	C
f) We use calculators.	A	B	C
g) We use computers.	A	B	C
h) We use things from every day life in solving science problems.	A	B	C
i) We work together in pairs or small groups.	A	B	C
j) The teacher gives us homework.	A	B	C
k) We can begin our homework in class.	A	B	C
l) The teacher checks homework.	A	B	C
m) We check each other's homework.	A	B	C
n) We discuss our completed homework.	A	B	C
o) The teacher gives a demonstration of an experiment.	A	B	C
p) We ourselves do an experiment in class.	A	B	C

THANK YOU for the thought and effort you have put into answering these questions. We wish you well in all that you do.

INTERNATIONAL OPTION

24. **Outside of school, how often do you do these activities?**

Circle one letter, A, B, C, or D, for each line.

		about every day	*about once a week*	*about once a month*	*rarely*
a)	read a book or magazine	A	B	C	D
b)	visit a museum or art exhibition	A	B	C	D
c)	attend a concert	A	B	C	D
d)	go to the theatre	A	B	C	D
e)	go to the movies	A	B	C	D

25. **Outside of school, how often do you watch the following kinds of programs on television or video?**

Circle one letter, A, B, C, or D, for each line.

		about every day	*about once a week*	*about once a month*	*rarely*
a)	news or documentaries	A	B	C	D
b)	opera, ballet or classical music	A	B	C	D
c)	nature, wildlife or history	A	B	C	D
d)	popular music	A	B	C	D
e)	sports	A	B	C	D
f)	video games	A	B	C	D
g)	cartoons	A	B	C	D
h)	comedy, adventure or suspense	A	B	C	D

STOP

There are no more questions in this booklet

If you have finished answering this booklet before the time is over then you may go back and review your answers. Thank you for taking the time to answer these questions carefully.

Section 2

Teacher Background Questionnaire (TQ1)
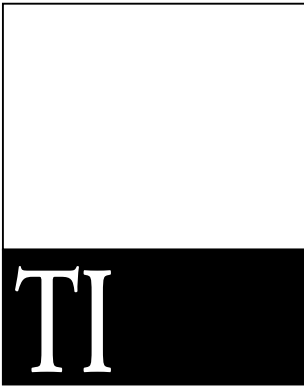
Identification Label

TI

School ID :
Stratum ID:
Teacher ID: Link:
Name:
Class ID:
Name of Class:
Subject: Grade:

GENERAL DIRECTIONS:

1. Identify a place and a time when you will be able to complete the questionnaire without being interrupted. The questionnaire has been designed to be completed within 60 minutes by most teachers. However, the amount of time you will need may be either more or less. To make it as easy as possible for you to respond, most items may be completed simply by checking the appropriate box.

2. There are no "right" or "wrong" answers to any of these items. The questionnaire is designed to provide information about teachers' professional experiences, opinions, and classroom activities.

3. Several items ask you to think of a recent class <hour/period> as you respond. In responding to these items, choose a recent class <hour/period> with your class which you can recall in some detail and which was fairly typical of what occurs in your classroom i.e. a class <hour/period> which was not affected by special events such as assemblies, guests, student testing other than short quizzes, or any other unusual circumstances. Remember, "your class" is the class which is identified on the cover of this questionnaire, and which will be tested as part of TIMSS in your school.

4. More specific instructions to assist you in responding are found in *italics* for each item. Once you have completed the questionnaire, place it into the return envelope provided and return it to:

<center><Country Specific Information></center>

Again, thank you for your time, effort and thought in completing this questionnaire!

1.   How old are you?

Check one box only.

under 25 .... ☐

25-29 .... ☐

30-39 .... ☐

40-49 .... ☐

4. At which grade levels are you teaching <u>Mathematics</u> during this school year?
NRC Note: <List only country-specific grades and their appropriate designations.>

Check one box in each row.

☐ Do not teach mathematics this year

		Yes	*No*
a)	<PRE-KINDERGARTEN>	☐	☐
b)	<KINDERGARTEN>	☐	☐
c)	<GRADE 1>	☐	☐
d)	<GRADE 2>	☐	☐
e)	<GRADE 3>	☐	☐
f)	<GRADE 4>	☐	☐
g)	<GRADE 5>	☐	☐
h)	<GRADE 6>	☐	☐
i)	<GRADE 7>	☐	☐
j)	<GRADE 8>	☐	☐
k)	<GRADE 9>	☐	☐
l)	<GRADE 10>	☐	☐
m)	<GRADE 11>	☐	☐
n)	<GRADE 12>	☐	☐
o)	<GRADE 13>	☐	☐

5. At which grade levels are you teaching <u>Science</u> during this school year?
NRC Note: <List only country-specific grades and their appropriate designations.>

Check one box in each row.

☐ Do not teach science this year

		Yes	*No*
a)	<PRE-KINDERGARTEN>	☐	☐
b)	<KINDERGARTEN>	☐	☐

6.   **Do you teach part-time or full-time?**

Check one.

Part-time .... ☐

Full-time .... ☐

7.   **By the end of this school year how many years will you have been teaching altogether?**

Please round to the nearest whole number.

_____

8.   **At which of these grade levels have you taught in the past 5 years?**
NRC Note: <List only country-specific grades and their appropriate designations.>

Check one box in each row.

		Yes	*No*
a)	<PRE-KINDERGARTEN>	☐	☐
b)	<KINDERGARTEN>	☐	☐
c)	<GRADE 1>	☐	☐
d)	<GRADE 2>	☐	☐
e)	<GRADE 3>	☐	☐
f)	<GRADE 4>	☐	☐
g)	<GRADE 5>	☐	☐

9. **APPROXIMATELY how many hours per week do you normally spend on each of the following activities outside the formal school day?**

Check one box in each row.

	none	*less than 1 hour*	*1 - 2 hours*	*3 - 4 hours*	*more than 4 hours*
a) preparing or grading student tests or exams	☐	☐	☐	☐	☐

11. **To be good in mathematics at school, how important do you think it is for students to...**

Check one box in each row.

		not important	*somewhat important*	*very important*
a)	remember formulas and procedures	☐	☐	☐
b)	think in a sequential and procedural manner	☐	☐	☐
c)	understand mathematical concepts, principles, and strategies	☐	☐	☐
d)	be able to think creatively	☐	☐	☐
e)	understand how mathematics is used in the real world	☐	☐	☐
f)	be able to provide reasons to support their solutions	☐	☐	☐

12. **To what extent do you agree or disagree with each of the following statements?**

Check one box in each row.

		strongly disagree	*disagree*	*agree*	*strongly agree*
a)	Mathematics is primarily an abstract subject.	☐	☐	☐	☐
b)	Mathematics is primarily a formal way of representing the real world.	☐	☐	☐	☐
c)	Mathematics is primarily a practical and structured guide for addressing real situations.	☐	☐	☐	☐
d)	If students are having difficulty, an effective approach is to give them more practice by themselves during the class.	☐	☐	☐	☐
e)	Some students have a natural talent for mathematics and others do not.	☐	☐	☐	☐
f)	More than one representation (picture, concrete material, symbol set, etc.) should be used in teaching a mathematics topic.	☐	☐	☐	☐
g)	Mathematics should be learned as sets of algorithms or rules that cover all possibilities.	☐	☐	☐	☐
h)	Basic computational skills on the part of the teacher are sufficient for teaching <PRIMARY SCHOOL> mathematics.	☐	☐	☐	☐
i)	A liking for and understanding of students are essential for teaching mathematics.	☐	☐	☐	☐

13. **Indicate your familiarity with each of the following documents:**

NRC Note: <Include country-specific appropriate options only>

Check one box in each row.

	no such document	*not familiar*	*fairly familiar*	*very familiar*

a)   <THE NATIONAL CURRICULUM GUIDE
FOR MATHEMATICS> ....

16.   **How many minutes per week do you teach mathematics to your class?**

Please write in a number.

_____ *minutes*

NRC Note: **TEXTBOOKS** <Insert the country specific textbook list used in the TIMSS document analysis. If the TIMSS document analysis list is not exhaustive of all texts used in your country, use the open-ended question (option 2). The open-ended option may be used alone or in conjunction with the TIMSS document analysis list.>

17.   **Do you use a textbook in teaching mathematics to your class?**

Check one box.

Yes ☐   No ☐

Option 1

If YES, which of the following textbooks do you use most?

		Yes	*No*
a)	<COUNTRY SPECIFIC TEXT>	☐	☐
b)	<COUNTRY SPECIFIC TEXT>	☐	☐
c)	<COUNTRY SPECIFIC TEXT>	☐	☐
d)	<COUNTRY SPECIFIC TEXT>	☐	☐

Option 2

If YES, write in the title, author, etc. of the textbook you use most.

Title: _____

Author (Publisher): _____

Year: _____

Other: _____

18.   **Approximately what percentage of your weekly mathematics**

19. **Do you divide your class into groups for teaching mathematics?**

Check one box.

never .... ☐

sometimes .... ☐

always .... ☐

20. **In your view to what extent do the following limit how you teach your class?**

Check one box in each row.

	not at all	*a little*	*quite a lot*	*a great deal*
a) students with different academic abilities.............	☐	☐	☐	☐
b) students who come from a wide range of backgrounds, (e.g., economic, language)	☐	☐	☐	☐
c) students with special needs, (e.g., hearing, vision, speech impairment, physical disabilities, mental or emotional/psychological impairment)	☐	☐	☐	☐
d) uninterested students...	☐	☐	☐	☐
e) disruptive students	☐	☐	☐	☐
f) parents interested in their children's learning and progress	☐	☐	☐	☐
g) parents uninterested in their children's learning and progress	☐	☐	☐	☐
h) shortage of computer hardware	☐	☐	☐	☐
i) shortage of computer software	☐	☐	☐	☐
j) shortage of other instructional equipment for students' use	☐	☐	☐	☐
k) shortage of equipment for your use in demonstrations and other exercises	☐	☐	☐	☐
l) inadequate physical facilities	☐	☐	☐	☐
m) high student/teacher ratio....................................	☐	☐	☐	☐
n) low morale among fellow teachers/administrators	☐	☐	☐	☐
o) low morale among students	☐	☐	☐	☐
p) threat(s) to personal safety or the safety of students	☐	☐	☐	☐

21. **How many of your students have access to calculators during mathematics lessons?**

Check one.

almost all	☐
about three quarters	☐
about half	☐
about one quarter	☐
none	☐

22. **How often do students in your class use calculators for the following activities?**

Check one box for each row.

	almost every day	once or twice a week	once or twice a month	never, or hardly ever
a) Checking answers	☐	☐	☐	☐
b) Tests and exams	☐	☐	☐	☐
c) Routine computation	☐	☐	☐	☐
d) Solving complex problems	☐	☐	☐	☐
e) Exploring number concepts	☐	☐	☐	☐

23. **When planning mathematics lessons, how much do you rely on:**

Check one box for each row.

	not at all	a little	quite a lot	a great deal
a) your own previously prepared lessons..............	☐	☐	☐	☐
b) a written plan compiled by teachers in the school	☐	☐	☐	☐
c) other teachers or math specialists in your school/department	☐	☐	☐	☐
d) student textbooks	☐	☐	☐	☐
e) other textbooks or resource books	☐	☐	☐	☐
f) teacher guides or teacher edition of textbook ...	☐	☐	☐	☐
g) external examinations or standardized tests	☐	☐	☐	☐

24. **In planning mathematics lessons, what is your main source of written information when...**

NRC Note: <List only country-specific appropriate options.>

Check one box in each row.

	\<National or Regional Examination Specifications\>	*\<National or Regional Curriculum Guide\>*	*\<School Curriculum Guide\>*	*Teacher Edition of Textbook*	*Student Edition of Textbook*	*Other Resource Books*
a) deciding which topics to teach (goals)	☐	☐	☐	☐	☐	☐
b) deciding how to present a topic	☐	☐	☐	☐	☐	☐
c) selecting problems and exercises for work in class and homework	☐	☐	☐	☐	☐	☐
d) selecting problems and applications for assessment and evaluation	☐	☐	☐	☐	☐	☐

Mathematics Topics

On the following pages there is a list of mathematics topics. Each topic is illustrated by a short list of subtopics. Not all topics are necessarily appropriate for your class. Nevertheless, please respond to the entire list so that we may obtain an indication of topics covered in your class that is as complete and accurate as possible.

- *Before marking anything, read quickly through the entire list to obtain an idea of where various topics may be found. Be sure to read the four examples on the next page.*

- *If you **have taught** a topic to your class, check the appropriate box indicating the total number of <periods> in which the topic was taught. Four choices are provided: 1-5 <periods>, 6-10 <periods>, 11-15 <periods>, and > 15 (i.e., more than 15) <periods>.*

- *If you **will continue to teach or begin teaching** a topic in future lessons this year, check the box in the "will teach later this year" column.*

- *If you have **not taught** a topic and will not teach it this year to your class, check the box in the "not taught this year" column.*

- *If you know that a topic was taught to your students in a **PREVIOUS YEAR,** check the box in the "taught in a previous year" column.*

- *If you have taught ANY of the subtopics listed under a major topic, indicate that you have taught that major topic area. Subtopics are listed for illustration purposes.*

- *For a few main topics, you are asked to indicate whether you have taught certain subtopics as well as the main topic, since these subtopics are of special interest in this study.*

EXAMPLES:

NRC Note: <Use country-specific appropriate designation for class
<period/hour>.

**How long did you spend teaching each of these topics to your class <u>this year</u>?
Will you cover any of these topics in future \<periods\>?**

Check as many boxes as apply for each topic listed.

	have taught this year				*will teach later*	*not taught*	*taught a previous*
	\<periods\> completed				*this year*	*this year*	*year*
	1-5	*6-10*	*11-15*	*\> 15*			

Example 1. You have not taught this topic and
will not teach it this year:

a) Linear Equations and Algebra .... ☐ ☐ ☐ ☐   ☐ ☐ ☐
Representing numerical situations;
solutions of simple equations;
use of algebraic expressions

Example 2. You have taught this topic in 2 class
\<periods\> and know it was taught in a
previous year as well:

25. **How long did you spend teaching each of these topic areas to your class <u>this year</u>? Will you cover any of these topics in future <periods>?**

Check as many boxes as apply for each topic listed.

	have taught this year <periods> completed				will teach later this year	not taught this year	taught a previous year
	1-5	*6-10*	*11-15*	*> 15*			
a) Whole Numbers	☐	☐	☐	☐	☐	☐	☐
Indicate your coverage both at the main topic level and for each of the following subtopics.							
1. Place value and numeration..................	☐	☐	☐	☐	☐	☐	☐
2. Whole number meanings, operations, and properties	☐	☐	☐	☐	☐	☐	☐
b) Common and Decimal Fractions	☐	☐	☐	☐	☐	☐	☐
Indicate your coverage both at the main topic level and for each of the following subtopics.							
1. Meaning, Representation and Uses of Decimal Fractions	☐	☐	☐	☐	☐	☐	☐
2. Operations of Decimal Fractions...........	☐	☐	☐	☐	☐	☐	☐
3. Properties of Decimal Fractions	☐	☐	☐	☐	☐	☐	☐

TOPIC	have taught this year <periods> completed				will teach later this year	not taught this year	taught a previous year
	1-5	6-10	11-15	> 15			
g) Measurement Units and Processes .... Ideas of measurement and units; standard (metric) units; length, area, volume, capacity, time, money and so on; use of measurement instruments	☐	☐	☐	☐	☐	☐	☐
h) Estimation and Error of Measurements Estimation of measurements other than perimeter and area; precision, accuracy, and errors of measurement	☐	☐	☐	☐	☐	☐	☐
i) Perimeter, Area and Volume .... Perimeter & area of triangles, quadrilaterals, circles and other two-dimensional shapes; calculating, estimating, and solving problems involving perimeters and areas; surface area and volume	☐	☐	☐	☐	☐	☐	☐
j) Basics of One and Two Dimensional Geometry .... Number lines and graphs in two dimensions; triangles, quadrilaterals, other polygons, and circles; equations of straight lines; Pythagorean Theorem	☐	☐	☐	☐	☐	☐	☐
k) Congruence and Similarity .... Concepts, properties and uses of congruent and similar figures, especially for triangles, squares, rectangles, and, other plane shapes	☐	☐	☐	☐	☐	☐	☐
l) Transformations and Symmetry .... Patterns; tessellations; symmetry in geometric figures; symmetry of number patterns; transformations and their properties	☐	☐	☐	☐	☐	☐	☐
m) Three Dimensional Figures and Constructions.. Constructions with compass and straight edge; three-dimensional geometry; conic sections	☐	☐	☐	☐	☐	☐	☐
n) Ratio and Proportion .... *Indicate your coverage both at the main topic level and for each of the following subtopics.*	☐	☐	☐	☐	☐	☐	☐
1. Concepts and meaning	☐	☐	☐	☐	☐	☐	☐
2. Applications and uses .... Maps and models; solving practical problems based on proportionality; solving proportional equations	☐	☐	☐	☐	☐	☐	☐

TOPIC	have taught this year <periods> completed				will teach later this year	not taught this year	taught a previous year
	1-5	*6-10*	*11-15*	*> 15*			
o) Functions, Relations, and Patterns .... Number patterns; properties, uses, and graphs of functions; problems involving functions relations and their properties;	☐	☐	☐	☐	☐	☐	☐
p) Equations and Formulas .... *Indicate your coverage both at the main topic level and for each of the following subtopics.*	☐	☐	☐	☐	☐	☐	☐
1. Linear equations and formulas .... Representing linear numerical situations; solving simple linear equations	☐	☐	☐	☐	☐	☐	☐
2. Representing other numerical situations solving other simple equations; use of algebraic expressions and inequalities	☐	☐	☐	☐	☐	☐	☐
q) Data Representation and Statistics .... Collecting data from experiments and simple surveys; representing and interpreting data (tables, charts, plots, and graphs); means, medians and other simple statistics; samples; uses and misuses of simple statistics	☐	☐	☐	☐	☐	☐	☐
r) Probability .... Concepts of "more likely" and "less likely"; computing probabilities (including informal computation or estimation of probabilities)	☐	☐	☐	☐	☐	☐	☐
s) Sets and Logic .... Sets, set notation and set operations; classification; logic and truth tables	☐	☐	☐	☐	☐	☐	☐
t) Problem Solving Strategies .... Problem solving heuristics and strategies	☐	☐	☐	☐	☐	☐	☐
u) Other Mathematics Content .... Mark here for all content not in one of the earlier categories. This includes advanced topics such as: Computers (flow charts, programming languages, programs); history and nature of mathematics; proofs and advanced mathematics topics.	☐	☐	☐	☐	☐	☐	☐

Think of the last <lesson> in which you taught mathematics to your class. (If this lesson was atypical, e.g. an examination or a field trip, pick the previous one.)

26a. How many minutes was this class <hour/period>?

Please write in a number.

_____ *minutes*

26b. For each of the following mathematics topics, indicate if it was the subject of this lesson.

Check one box in each row.

	Yes	*No*
1. Whole Numbers	☐	☐
2. Common Fractions	☐	☐
3. Decimal Fractions	☐	☐
4. Percentages	☐	☐
5. Other Number Sets and Concepts	☐	☐
6. Number Theory	☐	☐
7. Estimation and Number Sense	☐	☐
8. Measurement Units and Processes	☐	☐
9. Perimeter, Area and Volume	☐	☐
10. Basics of One and Two Dimensional Geometry	☐	☐
11. Geometric Congruence and Similarity	☐	☐
12. Geometric Transformations and Symmetry	☐	☐
13. Three Dimensional Geometry and Constructions	☐	☐
14. Ratio and Proportion	☐	☐
15. Functions, Relations and Patterns	☐	☐
16. Equations, Inequalities and Algebraic Formulas	☐	☐
17. Probability and Statistics	☐	☐
18. Sets and Logic	☐	☐
19. Problem Solving Strategies	☐	☐
20. Other Mathematics Content	☐	☐

26c. Was this lesson...

Check one box in each row.

	Yes	*No*
1. the introduction of this topic	☐	☐
2. a continuation of a previous lesson on the same topic	☐	☐
3. the end of the coverage of this topic	☐	☐

26d. **Did you assign homework after the class <hour/period>?**

Check one box.

Yes ☐   No ☐

26e. **If yes, how long would it take a typical student to complete this homework?**

Please write in a number.

_____ *minutes*

Think of the same mathematics class <hour/period>.

27a. **How did the lesson proceed?**

The following presents a list of activities that may occur during a lesson. Although the list is not exhaustive of what happens in a classroom, most classroom activities may be considered as variations of those listed below. Using this list, indicate how your lesson developed. In the blanks on the right, write in the order in which the activities used in the lesson took place (1 = first, 2 = second, and so on) and estimate the amount of time you spent on each one. Ignore activities you used that do not fit into the descriptions listed. Write in the order and the approximate number of minutes for each activity. NOTE: If you did not do a certain activity write zero in the blank next to it.

	order	minutes
• review of previous lesson(s)	_____	_____
• a short quiz or test to review previous lesson	_____	_____
• oral recitation or drill (students responding aloud)	_____	_____
• review or correction of previous lesson's homework	_____	_____
• **introduction** of a topic (class discussion, teacher explanation/demonstration, film, video, use of concrete materials etc.)	_____	_____
• **development** of a topic (class discussion, teacher explanation/demonstration, group problem solving, film, video, etc.)	_____	_____
• small group activities (with or without teacher)	_____	_____
• students do paper-and-pencil exercises related to topic (not the same as homework)	_____	_____
• assignment of student homework	_____	_____
• students work on homework in class	_____	_____
• student laboratory or data collection activity (not a separate laboratory hour) or hands-on session	_____	_____

27b. **In this class <hour/period> did the students work in small groups?**

Check one box.

none of the time .... ☐

some of the time .... ☐

all the time .... ☐

28. **In your mathematics lessons, how often do you usually ask**

30. In mathematics lessons, how often do students...

Check one box in each row.

		never or almost never	some lessons	most lessons	every lesson
a)	work individually without assistance from the teacher	☐	☐	☐	☐
b)	work individually with assistance from the teacher	☐	☐	☐	☐
c)	work together as a class with the teacher teaching the whole class	☐	☐	☐	☐
d)	work together as a class with students responding to one another	☐	☐	☐	☐
e)	work in pairs or small groups without assistance from the teacher	☐	☐	☐	☐
f)	work in pairs or small groups with assistance from the teacher	☐	☐	☐	☐

31. How often do you usually assign mathematics homework?

Check one box.

33. **If you assign mathematics homework, how often do you assign each of the following kinds of tasks?**

Check one box in each row.

		never	rarely	sometimes	always	I do not assign homework
a)	worksheets or workbook	☐	☐	☐	☐	☐
b)	problem/question sets in textbook	☐	☐	☐	☐	☐
c)	reading in a textbook or supplementary materials	☐	☐	☐	☐	☐
d)	writing definitions or other short writing assignment	☐	☐	☐	☐	☐
e)	small investigation(s) or gathering data	☐	☐	☐	☐	☐
f)	working individually on long term projects or experiments	☐	☐	☐	☐	☐
g)	working as a small group on long term projects or experiments	☐	☐	☐	☐	☐
h)	finding one or more uses of the content covered	☐	☐	☐	☐	☐
i)	preparing oral reports either individually or as a small group	☐	☐	☐	☐	☐
j)	keeping a journal	☐	☐	☐	☐	☐

34. **If students are assigned <u>written</u> mathematics homework, how often do you do the following?**

Check one box in each row.

		never	rarely	sometimes	always	I do not assign homework
a)	record whether or not the homework was completed	☐	☐	☐	☐	☐
b)	collect, correct and keep assignments	☐	☐	☐	☐	☐
c)	collect, correct assignments and then return to students	☐	☐	☐	☐	☐
d)	give feedback on homework to whole class	☐	☐	☐	☐	☐
e)	have students correct their own assignments in class	☐	☐	☐	☐	☐
f)	have students exchange assignments and correct them in class	☐	☐	☐	☐	☐
g)	use it as a basis for class discussion	☐	☐	☐	☐	☐
h)	use it to contribute towards students' grades or marks	☐	☐	☐	☐	☐

35. **Is science taught mainly as a separate subject (i.e., not integrated with other subjects) to your class?**

Check one box.

Yes ☐　No ☐

a) **If YES...**

how many minutes per week is science taught to your class?

Please write in a number.

_____ *minutes*

b) **If NO...**

please estimate on average about how many minutes per week are spent on science related instruction.

Please write in a number.

_____ *minutes*

36. **In your science lessons, how often do students...**

Check one box in each row.

		never or almost never	*some lessons*	*most lessons*	*every lesson*
a)	work individually without assistance from the teacher	☐	☐	☐	☐
b)	work individually with assistance from the teacher	☐	☐	☐	☐
c)	work together as a class with the teacher teaching the whole class	☐	☐	☐	☐
d)	work together as a class with students responding to one another	☐	☐	☐	☐
e)	work in pairs or small groups without assistance from the teacher	☐	☐	☐	☐
f)	work in pairs or small groups with assistance from the teacher	☐	☐	☐	☐

On the following pages there is a list of science topics. Each topic is illustrated by a short list of subtopics. Not all topics are necessarily appropriate for your class. Nevertheless, please respond to the entire list so that we may obtain an indication of topics covered in your class that is as complete and accurate as possible.

- *Before marking anything, read quickly through the entire list to obtain an idea of where various topics may be found.*

- *If you **have taught** a topic with your class, check the appropriate box indicating the total number of <periods> in which the topic was taught. Four choices are provided: 1-5 <periods>, 6-10 <periods>, 11-15 <periods>, and > 15 (i.e., more than 15) <periods>.*

- *If you **will continue or begin teaching** a topic in future lessons this year, check the box in the "will teach later this year" column.*

- *If you have **not taught** a topic and will not teach it this year to your class, check the box in the "not taught this year" column.*

- *If you know that a topic was taught to your students in a **PREVIOUS YEAR**, check the box in the "covered a previous year" column.*

- *If you have taught ANY of the subtopics listed under a major topic, indicate that*

37. **How long did you spend teaching each of these topic areas to your class <u>this year</u>? Will you cover any of these topics in future <periods>?**

Check as many boxes as apply for each topic listed.

	have taught						
	this year				*will teach*	*not*	*taught a*
	<periods> completed				*later*	*taught*	*previous*
1-5	*6-10*	*11-15*	*> 15*		*this year*	*this year*	*year*

TOPIC	have taught this year <periods> completed				will teach later this year	not taught this year	taught a previous year
	1-5	6-10	11-15	> 15			
i) Structure and Function of Living Things Types and features of cells; functions of organs and tissues (e.g., bird's wings, plant leaves, earthworm's circulatory system)	☐	☐	☐	☐	☐	☐	☐
j) Life Processes and Systems .... Respiration; digestion; reactions of living things to stimuli; photosynthesis	☐	☐	☐	☐	☐	☐	☐
k) Life Cycles and Genetics .... Life cycles of plants and animals; plant and animal reproduction; inheritance and variation; evolution and diversity	☐	☐	☐	☐	☐	☐	☐
l) Interactions of Living Things .... Ecosystems; habitats, niches; food webs, food chains; oxygen, carbon dioxide cycle	☐	☐	☐	☐	☐	☐	☐
m) Environmental and Resource Issues ...... Pollution; saving the rain forests; recycling garbage; effects of natural disasters; food supply and demand	☐	☐	☐	☐	☐	☐	☐
n) Animal Behavior .... Migration; hibernation; social organization (e.g., elephant herds, beehives); communication	☐	☐	☐	☐	☐	☐	☐
o) Matter .... Classification and structure of matter (e.g., elements, compounds, mixtures, atoms, molecules); physical and chemical properties (e.g., solids, liquids, gases; acids/bases)	☐	☐	☐	☐	☐	☐	☐
p) Energy Types, Sources, and Conversions Types of energy (e.g., mechanical, chemical); sources of energy (food, oil, wood); simple machines (e.g., levers, pulleys); work, efficiency	☐	☐	☐	☐	☐	☐	☐
q) Energy Processes .... Heat and temperature; sound, electricity, magnetism	☐	☐	☐	☐	☐	☐	☐
1. Light	☐	☐	☐	☐	☐	☐	☐
r) Physical and Chemical Transformations Changes in states (e.g., freezing, boiling, evaporation); chemical changes (e.g., burning, rusting, batteries, radioactivity)	☐	☐	☐	☐	☐	☐	☐
s) Forces and Motion .... Gravity and friction; speed; acceleration	☐	☐	☐	☐	☐	☐	☐

	have taught this year <periods> *completed*				*will teach later this year*	*not taught this year*	*taught a previous year*
	1-5	*6-10*	*11-15*	*> 15*			
t) **Science, Technology, and Society**	☐	☐	☐	☐	☐	☐	☐

INTERNATIONAL OPTION

38. **Was Teaching your first choice as a career when beginning university or teacher education college?**   Yes ☐   No ☐

39. **Would you change to another career if you had the opportunity?**   Yes ☐   No ☐

40. **Do you think that society appreciates your work?**   Yes ☐   No ☐

41. **Do you think your students appreciate your work?**   Yes ☐   No ☐

42. **Approximately how many books are in your home?**
    (Do not count magazines or newspapers.)

Check one box only.

a) none or very few (0-10) .... ☐

b) enough to fill a shelf (11-25) .... ☐

c) enough to fill a bookcase (26-100) .... ☐

d) enough to fill two bookcases (101-200) .... ☐

e) enough to fill three or more bookcases (more than 200) .... ☐

43. **Please rank the following professions in order of social status. Assign a rank of '1' to the profession with the highest social status, and ' 9' to the profession with the lowest status.**

a) accountant .... _____

b) <MEDICAL DOCTOR> .... _____

c) lawyer .... _____

d) engineer .... _____

e) nurse .... _____

f) senior <CIVIL SERVANT> .... _____

g) teacher, primary school .... _____

h) teacher, secondary school .... _____

i) <UNSKILLED WORKER> .... _____

THANK YOU for the thought, time, and effort you have put into completing this questionnaire.

Section 3

School Background Questionnaire (SCQ1)

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2. **Which of the following grade levels are found in your school?**
<List only country-specific grades and their appropriate designations.>

Check one box in *each line.*

	Yes	*No*
a) <Pre-kindergarten>	☐	☐
b) <Kindergarten>		

---

3. **How many of the following are on the staff of your school?**

For each type of position listed, provide the number of full-time equivalents (FTEs) present in your school. For example, one full-time (100% time) teacher represents 1 FTE; one part-time (50% time) teacher represents .5 FTE. A staff member who teaches 50% time and functions as an assistant principal for the remaining 50% represents .5 FTE teacher and .5 FTE assistant principal. Write in 0 (zero) if there are no such positions in your school.

Number of FTEs

a) Principals .... _____

b) Assistant principals .... _____

6. **What percentage of the <classroom teachers> teach...**

Please indicate a

percentage for each
of the following.

Write 0 (zero) if none.

a) three quarters or more of their teaching load in mathematics .... _____%

b) no mathematics .... _____%

c) three quarters or more of their teaching load in science subjects .... _____%

d) no science subjects .... _____%

e) three quarters or more of their teaching load in mathematics AND
science subjects .... _____%

f) no mathematics OR science subjects .... _____%

---

7. **How long do students typically stay with the same teacher?**

Check only one box.

One school year .... ☐

Two school years .... ☐

Three school years .... ☐

Four or more school years .... ☐

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8. **During the school week, about how many hours of scheduled school time do teachers usually have for...**

Write in a numeric
in 0 (zero) if no
time is scheduled.

value. Please write

a) tasks related to teaching mathematics (e.g.,
lesson preparation, grading homework, etc.) .... _____ *hours/week*

b) teaching mathematics classes .... _____ *hours/week*

c) tasks related to teaching science (e.g.,
lesson preparation, grading homework, etc.) .... _____ *hours/week*

d) teaching science classes .... _____ *hours/week*

9. **Cooperation and Collaboration:**

Check only one box for each.

		Yes	*No*
a)	Does your school have an official policy related to promoting cooperation and collaboration among teachers?	☐	☐
b)	Are teachers in your school encouraged to share and discuss instructional ideas and materials?	☐	☐
c)	Do teachers in your school meet regularly to discuss instructional goals and issues?	☐	☐

10. **As principal of this school, about how many hours per month do you usually spend on each of the following activities?**

Please indicate the approximate **number** *of hours for each item. Please write 0 (zero) if no time is spent on an activity.*

		hours per month
a)	Hiring teachers	_____
b)	Representing the school in the community	_____
c)	Representing the school at official meetings	_____
d)	Internal administrative tasks (e.g., regulations, school budget, timetable)	_____
e)	Teaching (including preparation)	_____
f)	Giving a demonstration lesson	_____
g)	Discussing educational objectives with teachers	_____
h)	Initiating curriculum revision and/or planning	_____
i)	Talking with parents	_____
j)	Counseling and disciplining of students	_____
k)	Responding to requests from <district>, <state>, or <national> education officials	_____
l)	Training teachers	_____
m)	Professional development activities	_____
n)	Other activities	_____

11. **With regard to your school, who has primary responsibility**
for each of the following activities?

*Check **one** box in each line.*

	not a school responsibility	*<school's governing board>*	*principal*	*teachers*
a) Hiring teachers				

12.   How much influence do each of the following have in determining the curriculum that is taught in your school?

*Check **one** box in each line.*

		none	a little	some	a lot
a)	<National Curriculum Council>	☐	☐	☐	☐
b)	<National Subject Association>	☐	☐	☐	☐
c)	<educational region or district>	☐	☐	☐	☐
d)	<school governing board>	☐	☐	☐	☐
e)	Principal/head of school	☐	☐	☐	☐
f)	Teachers (collectively for the school)	☐	☐	☐	☐
g)	Teachers (of same subject) as a group	☐	☐	☐	☐
h)	Each teacher individually	☐	☐	☐	☐
i)	Parents	☐	☐	☐	☐
j)	Students	☐	☐	☐	☐
k)	Church/religious groups	☐	☐	☐	☐
l)	Business community	☐	☐	☐	☐
m)	Textbook publishers	☐	☐	☐	☐
n)	External examinations/standardized tests	☐	☐	☐	☐
o)	Teacher unions	☐	☐	☐	☐

13.   Does your school have its own written statement of the curriculum content to be taught (i.e., other than the national or regional curriculum guides)?

*Check **one** box.*

in each line.

		Yes	No
a)	For mathematics	☐	☐
b)	For science	☐	☐

14.   In your school, how many computers are...

Write in a number for

each. Write 0 (zero) if there are none.

a)	available for use by teachers or students	_____
b)	used by teachers for administrative purposes (e.g., grade reports, attendance, etc.)	_____
c)	used by teachers during instructional time	_____
d)	used by students for educational purposes	_____
e)	used by office staff for school record keeping.	_____

15. **Is your school's capacity to provide instruction affected by a shortage or inadequacy of any of the following?**

*Check **one** box in each line*

	none	a little	some	a lot
a) Instructional materials (e.g., textbooks)	☐	☐	☐	☐
b) Budget for supplies (e.g., paper, pencils)	☐	☐	☐	☐
c) School buildings and grounds....................................	☐	☐	☐	☐
d) Heating/cooling and lighting systems........................	☐	☐	☐	☐
e) Instructional space (e.g., classrooms)	☐	☐	☐	☐
f) Special equipment for handicapped students.............	☐	☐	☐	☐
g) Computers for mathematics instruction.....................	☐	☐	☐	☐

16. The students in your school:

Write in the answer for each of the following. Write 0 (zero) if there are none.

		boys	girls
a)	What is the total school enrollment (number of students)?	_____	_____
b)	On a typical school day, what percentage of students are absent from school for any reason?	_____ %	
c)	About what percentage of students who begin the year in your school also finish the year in your school?	_____ %	
d)	What percentage of the students in your school transfer into your school after the beginning of the school year?	_____ %	

Concerning <L-GRADE> students...

		boys	girls
e)	How many students are in <L-GRADE>?	_____	_____
f)	How many students in <L-GRADE> are repeating the grade?	_____	_____
g)	What is the approximate average class size in <L-GRADE>?	_____	
h)	How many <L-GRADE> students are in multi-grade classrooms?	_____	
i)	How many students in <L-GRADE> study mathematics?	_____	_____
j)	How many students in <L-GRADE> study science?	_____	_____

Concerning <U-GRADE> students...

17. **About how often does the school administration or staff have to deal with the following behaviors among <U-GRADE> students?**

indicate the approximate percentage of

Check one box for each of the following and

<U-GRADE> students involved for each of the following.

		rarely	*monthly*	*weekly*	*daily*	
a)	arriving late at school	☐	☐	☐	☐	_____ %
b)	absenteeism (i.e., unjustified absences) ..	☐	☐	☐	☐	_____ %
c)	skipping class <hours/periods>	☐	☐	☐	☐	_____ %
d)	violating dress code	☐	☐	☐	☐	_____ %
e)	classroom disturbance	☐	☐	☐	☐	_____ %
f)	cheating	☐	☐	☐	☐	_____ %
g)	profanity	☐	☐	☐	☐	_____ %
h)	vandalism	☐	☐	☐	☐	_____ %
i)	theft	☐	☐	☐	☐	_____ %
j)	intimidation or verbal abuse of other students	☐	☐	☐	☐	_____ %
k)	physical injury to other students	☐	☐	☐	☐	_____ %

l) intimidation or verbal abuse of

18.   In your school:

*If the instructional time is the same for both <L-GRADE> and <U-GRADE> students in your school, check the box to the right and **respond only** to questions under the column for the upper grade ....* ☐

<L-GRADE>   <U-GRADE>

a) How many instructional days are in the
school year? ....   _____   _____ *days*

b) How many **full** instructional days (over 4 hours)
are there in the school week? ....   _____   _____ *days*

c) How many

20. Does your school provide REMEDIAL TEACHING in MATHEMATICS?

Check one

Yes ☐   **No** ☐

If yes, how is this organized?

	Yes	*No*
a) Groups are formed within regular mathematics class	☐	☐
b) Students are withdrawn from their regular mathematics class	☐	☐
c) Students receive extra <tuition> before or after school	☐	☐
d) Other	☐	☐

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21. Does your school provide REMEDIAL TEACHING in SCIENCE?

Check one

Yes ☐   **No** ☐

If yes, how is this organized?

Yes   *No*

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22. Does your school provide SPECIAL ENRICHMENT activities in MATHEMATICS for advanced students?

Check one

Yes ☐   **No** ☐

If yes, how is this organized?

	Yes	*No*
a) Groups are formed within regular mathematics class	☐	☐
b) Students are withdrawn from their regular mathematics class	☐	☐
c) Students receive extra <tuition> before or after school	☐	☐
d) Other	☐	☐

23. **Does your school provide SPECIAL ENRICHMENT activities in SCIENCE?**

Check

one

Yes ☐ **No** ☐

If yes, how is it organized?

		Yes	*No*
a)	Groups are formed within regular science class	☐	☐
b)	Students are withdrawn from their regular science class	☐	☐
c)	Students receive extra <tuition> before or after school	☐	☐
d)	Other	☐	☐

24. **Do all students in <U-GRADE> follow the same course of study in mathematics?**

Check one

Yes ☐ **No** ☐

If yes, then...

a) how many instructional minutes per week are students in the <U-GRADE> REQUIRED to spend in mathematics classes? .... _____ *minutes*

b) how many instructional weeks per year are students in the <U-GRADE> REQUIRED to spend in mathematics classes? .... _____ *weeks*

If no, then...

c) how many different courses of study in mathematics are available to <U-GRADE> students .... _____ *courses*

d) what percentage of <U-GRADE> students take...

   1. the most advanced mathematics course of study ...... _____ *%*

   2. the least advanced mathematics course of study .... _____ *%*

e) what is the total number of instructional minutes per week for those <U-GRADE> students who take...

   1. the most advanced mathematics course of study ...... _____ *minutes*

   2. the least advanced mathematics course of study .... _____ *minutes*

f) what is the total number of instructional weeks per year for those <U-GRADE> students who take...

   1. the most advanced mathematics course of study ...... _____ *weeks*

   2. the least advanced mathematics course of study .... _____ *weeks*

25. **If all students do not follow the same course of study in mathematics, how important are each of the following factors in deciding which courses of study in mathematics a <U-Grade> student takes?**

Check one for each of the following.

		not important	*somewhat important*	*moderately important*	*very important*	*Not applicable*
a)	academic performance	☐	☐	☐	☐	☐
b)	performance on a standardized test	☐	☐	☐	☐	☐
c)	performance on an entrance examination	☐	☐	☐	☐	☐
d)	performance on an oral examination	☐	☐	☐	☐	☐
e)	teacher recommendations	☐	☐	☐	☐	☐
f)	parental wishes	☐	☐	☐	☐	☐
g)	the student's own wishes	☐	☐	☐	☐	☐
h)	curricular requirements	☐	☐	☐	☐	☐

26. **Do all students in <U-GRADE> follow the same course of study in science?**

Check one

Yes ☐   **No** ☐

If yes, then...

a) how many instructional minutes per week are students in the <U-GRADE> REQUIRED to spend in science classes? .... _____ *minutes*

b) how many instructional weeks per year are students in the <U-GRADE> REQUIRED to spend in science classes? .... _____ *weeks*

If no, then...

c) how many different courses of study in science are available to <U-GRADE> students? .... _____ *courses*

d) what percentage of <U-GRADE> students take...

    1. the most advanced science course of study ..... _____ %

    2. the least advanced science course of study ...... _____ %

e) what is the total number of instructional minutes per week for those <U-GRADE> students who take...

    1. the most advanced science course of study ..... _____ *minutes*

    2. the least advanced science course of study ...... _____ *minutes*

f) what is the total number of instructional weeks per year for those <U-GRADE> students who take...

    1. the most advanced science course of study ..... _____ *weeks*

    2. the least advanced science course of study ...... _____ *weeks*

27. **If all students do not follow the same course of study in science, how important are each of the following factors in deciding which courses of study in science a <U-Grade> student takes?**

Check one for each of the following.

		not important	*somewhat important*	*moderately important*	*very important*	*Not applicable*
a)	academic performance	☐	☐	☐	☐	☐
b)	performance on a standardized test	☐	☐	☐	☐	☐
c)	performance on an entrance examination	☐	☐	☐	☐	☐
d)	performance on an oral examination	☐	☐	☐	☐	☐
e)	teacher recommendations	☐	☐	☐	☐	☐
f)	parental wishes	☐	☐	☐	☐	☐
g)	the student's own wishes	☐	☐	☐	☐	☐
h)	curricular requirements	☐	☐	☐	☐	☐

International Option

28. Approximately what percentage of the students in your school...

each of the following.
Write 0 (zero) if there are

Indicate a percentage for

none.

a) come from <disadvantaged economic backgrounds> .... _____ %

b) come from homes where neither parent received more than
primary education .... _____ %

c) come from one-parent families .... _____ %

d) attended preschool .... _____ %

e) have a first language different from the language taught in the
school .... _____ %

f) have learning problems .... _____ %

g) have health problems .... _____ %

h) have nutrition problems .... _____ %

> NRC Note: <disadvantaged economic backgrounds> must be defined by NRCs in
> a way that is meaningful in their countries. It is understood that such a definition
> is not always possible.

29. On what basis are pupils admitted to your school?

in each line

Check only one box

		Yes	*No*
a)	Residence in a particular area	☐	☐
b)	Student's academic performance	☐	☐
c)	Interview with student	☐	☐
d)	Interview with parent(s)	☐	☐
e)	Preference given to students with older brothers or sisters in the school	☐	☐
f)	Preference given according to date of application	☐	☐
g)	Recommendation of previous teachers	☐	☐
h)	Preference given to students from a particular school	☐	☐
i)	Preference given to children of former students	☐	☐
j)	Performance on a standardized test	☐	☐
k)	Performance on an entrance examination	☐	☐
l)	Performance on an oral examination	☐	☐
m)	Other	☐	☐

THANK YOU for your thought, time, and effort in answering these questions.