

Surveys of Enacted Curriculum

SURVEY OF CLASSROOM PRACTICES IN ELEMENTARY SCHOOL MATHEMATICS

Thank you for agreeing to participate in this survey on science and mathematics instruction. The enclosed survey is part of a collaborative effort to provide education policymakers, administrators, and most importantly, teachers like yourself with comparative information about mathematics and science instruction in your district and state, and across the several states participating. To learn more about this project please visit the project website; <http://www.ccsso.org/sec.html>

Your participation in this survey is voluntary. If you choose to participate, all of your responses will be kept confidential. No one outside of our research team will ever have access to your responses, nor will any individual responses be shared with the staff in your district or state. All data from this survey will remain the sole possession of the Surveys of Enacted Curriculum-Wisconsin research team, and no individuals will be identified in any of the reports. The questionnaires will be stored in a locked file cabinet in the Surveys of Enacted Curriculum offices. The questionnaire poses no risk to you. There is no penalty for refusal to participate. You may withdraw from the study simply by returning the questionnaire without completing it, without penalty or loss of services or benefits to which you would be otherwise entitled.

If you have any questions regarding your rights as a research participant, please contact the University of Wisconsin-Madison School of Education's Human Subjects Committee office at (608) 262-2463.

Surveys of Enacted Curriculum

SURVEY OF CLASSROOM PRACTICES IN MIDDLE SCHOOL MATHEMATICS

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SURVEY OF CLASSROOM PRACTICES IN HIGH SCHOOL MATHEMATICS

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Instructions for Selecting the Target Class --

Mathematics Instruction -- For all questions about classroom practices please refer only to activities related to mathematics instruction. If you teach more than one mathematics class, select the first class that you teach each week. If you teach a split class (i.e. the class is split into more than one group for mathematics instruction) select only one group to describe as the target class.

Please read each question and the possible responses carefully, and then mark your response by filling in the appropriate circle in the response section.

Section I

SCHOOL DESCRIPTION

¹ Which of these categories best describes the way your classes at this school are organized?

- ① Departmentalized Instruction
- ② Subject Area Specialist (non-departmental)
- ③ Self-contained
- ④ Team taught

² *If you are departmentalized, or a subject area specialist*, how many different mathematics courses do you currently teach?

- ①
 - ②
 - ③
 - ④
 - ⑤
 - ⑥
 - ⑦
- Number of courses taught

CLASS DESCRIPTION

- 3 Which term best describes the target class, or course, you are teaching?
- ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
- 0 = Other
1 = Elementary Math
2 = Middle School Math
3 = Pre-algebra
4 = Algebra
5 = Integrated Math
6 = Geometry
7 = Trigonometry
8 = Advance Math
9 = Calculus
- 4 Indicate the grade level of the majority of students in the target class.
- ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫
- K 1 2 3 4 5 6 7 8 9 10 11 12
- 5 How many students are in the target class?
- ① 10 or less
② 11 to 15
③ 16 to 20
④ 21 to 25
⑤ 26 to 30
⑥ 31 or more
- 6 What percentage of the students in the target class are **female**? (Estimate to the nearest ten percent.)
- ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
- Less than 10 10 20 30 40 50 60 70 80 90+ %
- 7 What percentage of the students in the target class are **not** Caucasian? (Estimate to the nearest ten percent.)
- ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
- Less than 10 10 20 30 40 50 60 70 80 90+ %
- 8 *During a typical week*, approximately how many hours will the target class spend in mathematics instruction?
- ① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨
- (Number of instructional hours)
- 9 What is the average length of each class period for this targeted mathematics class?
- ① Not applicable
② 30 to 40 minutes
③ 41 to 50 minutes
④ 51 to 60 minutes
⑤ 61 to 90 minutes
⑥ 91 to 120 minutes
⑦ Varies due to block scheduling or integrated instruction
- 10 How many weeks total will the target mathematics class/course meet for this school year?
- ① ②
- Total # weeks =** 1 to 12 13 to 24 25 to 36
- 11 Estimate the achievement level of the majority of students in the target class, based on national standards.
- ① High Achievement Levels
② Average Achievement Levels
③ Low Achievement Levels
④ Mixed Levels of Achievement
- 12 What percentage of students in the target class are Limited English Proficient (LEP)?
- ① None
② Less than 10%
③ 10% to 25%
④ 26% to 50%
⑤ More than 50%
- 13 What is considered most in scheduling students into this class?
- ① Ability or Achievement
② Limited English Proficiency
③ Parent Request
④ No one factor more than another
⑤ Teacher Recommendation
⑥ Student selects

MOST RECENT UNIT OF MATHEMATICS INSTRUCTION

For items 14-23, please respond with respect to the most recent mathematics instructional unit with the target class.

- 14 How many class periods did the unit cover? ① 1-2 periods ③ 11-15 periods
 ② 3-5 periods ④ 16-20 periods
 ⑤ 6-10 periods ⑥ 21 or more

What percent of mathematics instructional time was spent on the following activities?

Enter the percentage of time for each item in the box provided, so that items 15-23 total 100%. Then use the scale to code your response (rounded to the nearest 10%) for each item on the answer sheet.

	%	None	10	20	30	40	50	60	70	80	90+
15 Management or administrative routines, interruptions, other non-instructional activities, and handling absences or transfers		①	②	③	④	⑤	⑥	⑦	⑧	⑨	
16 Whole class lecture or class discussion		①	②	③	④	⑤	⑥	⑦	⑧	⑨	
17 Individual student work (e.g., completing exercises, reading textbook)		①	②	③	④	⑤	⑥	⑦	⑧	⑨	
18 Small group work		①	②	③	④	⑤	⑥	⑦	⑧	⑨	
19 Hands-on activities, manipulatives, or investigations or experiments in class		①	②	③	④	⑤	⑥	⑦	⑧	⑨	
20 Field study or out-of-class investigation		①	②	③	④	⑤	⑥	⑦	⑧	⑨	
21 Student demonstrations or presentations		①	②	③	④	⑤	⑥	⑦	⑧	⑨	
22 Review or work on homework during class		①	②	③	④	⑤	⑥	⑦	⑧	⑨	
23 Test or quiz		①	②	③	④	⑤	⑥	⑦	⑧	⑨	

100%

(Note: Total should sum to 100)

HOMEWORK

- 24 How many minutes does the typical student in the target class spend on a normal homework assignment?
- ① I do not assign homework ③ 31-60 minutes
 ① Less than 15 minutes ④ 61-90 minutes
 ② 15-30 minutes ⑤ More than 90 minutes
- 25 How often do you usually assign mathematics homework in the target class?
- ① Never (Skip to # 34) ③ 3-4 times per week
 ① Less than once per week ④ Every day
 ② Once or twice per week
- 26 Does homework count towards student grades in the target class?
- ① Never ② Usually does
 ① Usually does not ③ Always does

What percentage of the time that students in the target class spend on mathematics homework do they:

- | | None | Less than 25% | 25% to 33% | More than 33% |
|--|------|---------------|------------|---------------|
| 27 Do arithmetic computation or procedures | ① | ② | ③ | ④ |
| 28 Show steps required in doing a procedure or solving an equation | ① | ② | ③ | ④ |
| 29 Explain their reasoning or thinking in solving a problem | ① | ② | ③ | ④ |
| 30 Work on a demonstration, presentation, or proof of their mathematics work | ① | ② | ③ | ④ |
| 31 Collect data or information as part of mathematics homework | ① | ② | ③ | ④ |
| 32 Write a report for a mathematics project | ① | ② | ③ | ④ |
| 33 Other: _____ | ① | ② | ③ | ④ |

INSTRUCTIONAL ACTIVITIES IN MATHEMATICS

Listed below are some questions about what students in the target class do in mathematics. For each activity, pick one of the choices (0, 1, 2, 3) to indicate the percentage of instructional time that students are doing each activity. In responding, please think of an average student in this class.

What percentage of mathematics instructional time in the target class do students:

NOTE: No more than two '3's , or four '2's should be reported for this set of items.

	None	Less than 25%	25% to 33%	More than 33%
34 Collect or analyze data	①	②	③	④
35 Maintain and reflect on a mathematics portfolio of their own work	①	②	③	④
36 Use hands-on materials or manipulatives (e.g., counting blocks, geometric shapes, algebraic tiles)	①	②	③	④
37 Engage in mathematical problem solving (e.g., computation, story-problems, mathematical investigations)	①	②	③	④
38 Work in pairs or small groups	①	②	③	④
39 Do a mathematics activity with the class outside the classroom	①	②	③	④
40 Use computers, calculators, or other educational technology to learn mathematics	①	②	③	④

When students in the target class are engaged in *problem-solving activities* as part of mathematics instruction, what percentage of that time do students:

NOTE: No more than two '3's , or four '2's should be reported for this set of items.

	None	Less than 25%	25% to 33%	More than 33%
41 Complete computational exercises or procedures from a text or a worksheet	①	②	③	④
42 Solve word problems from a textbook or worksheet	①	②	③	④
43 Solve novel mathematical problems	①	②	③	④
44 Write an explanation to a problem using several sentences	①	②	③	④
45 Apply mathematical concepts to real or simulated "real-world" problems	①	②	③	④
46 Make estimates, predictions, guesses, or hypotheses	①	②	③	④
47 Analyze data to make inferences or draw conclusions	①	②	③	④
48 Other: _____	①	②	③	④

When students in the target class work in *pairs or small groups* as part of mathematics instruction, what percentage of that time do students:

NOTE: No more than two '3's , or four '2's should be reported for this set of items.

	None	Less than 25%	25% to 33%	More than 33%
49 Talk about ways to solve mathematics problems	①	②	③	④
50 Complete written assignments from the textbook or worksheets	①	②	③	④
51 Work on an assignment, report, or project that takes longer than one week to complete	①	②	③	④
52 Work on a writing project where group members help to improve each others' (or the group's) work	①	②	③	④
53 Review assignments, problems, or prepare for a test or quiz	①	②	③	④
54 Other: _____	①	②	③	④

When students in the target class are engaged in activities that involve the *use of hands-on materials* , what percentage of that time do students:

NOTE: No more than two '3's , or four '2's should be reported for this set of items.

	None	Less than 25%	25% to 33%	More than 33%
55 Work with materials such as counting blocks, geometric shapes, or algebraic tiles to understand concepts	①	②	③	④
56 Measure objects using tools such as rulers, scales, or protractors	①	②	③	④
57 Build models or charts	①	②	③	④
58 Collect data by counting, observing, or conducting surveys	①	②	③	④
59 Present information to students concerning a mathematical idea or project	①	②	③	④
60 Other: _____	①	②	③	④

USE OF CALCULATORS, COMPUTERS AND OTHER EQUIPMENT

When students in the target class are engaged in activities that involve the *use of calculators, computers, or other educational technology as part of mathematics instruction*, what percentage of that time do students:

NOTE: No more than two '3's , or four '2's should be reported for this set of items.

	None	Less than 25%	25% to 33%	More than 33%
61 Learn facts or practice procedures	①	①	②	③
62 Use sensors and probes	①	①	②	③
63 Retrieve or exchange data or information (e.g., using the Internet)	①	①	②	③
64 Display and analyze data	①	①	②	③
65 Develop geometric concepts	①	①	②	③
66 Take a test or quiz	①	①	②	③
67 Use individualized instruction or tutorial software	①	①	②	③

For Items 68-71, indicate how often the average student uses each of the following types of equipment in this mathematics class:

	Not Available	Available, but rarely used	Used less than 7 times per year	Used 7 to 36 times per year	Used Weekly
68 Math manipulatives (e.g., pattern blocks, algebraic tiles)	①	①	②	③	④
69 Measuring tools (e.g., rulers, protractors, scales)	①	①	②	③	④
70 Calculators	①	①	②	③	④
71 Graphing calculators	①	①	②	③	④

ASSESSMENTS

For items 72-79, indicate how often you use each of the following strategies when assessing students in the target mathematics class.

	None	1 - 4 times per year	1 - 3 times per month	1 - 3 times per week	4 - 5 times per week
72 Objective items (e.g., multiple choice, true/false)	①	②	③	④	⑤
73 Short answer questions such as performing a mathematical procedure	①	②	③	④	⑤
74 Extended response item for which student must explain or justify solution	①	②	③	④	⑤
75 Performance tasks or events (e.g., hands-on activities)	①	②	③	④	⑤
76 Individual or group demonstration, presentation	①	②	③	④	⑤
77 Mathematics projects	①	②	③	④	⑤
78 Portfolios	①	②	③	④	⑤
79 Systematic observation of students	①	②	③	④	⑤

INSTRUCTIONAL INFLUENCES

For items 80-89, indicate the degree to which each of the following influences what you teach in the target mathematics class.

	N/A	Strong Negative Influence	Somewhat Negative Influence	Little or No Influence	Somewhat Positive Influence	Strong Positive Influence
80 Your state's curriculum framework or content standards	①	②	③	④	⑤	⑥
81 Your district's curriculum framework or guidelines	①	②	③	④	⑤	⑥
82 Textbook / instructional materials	①	②	③	④	⑤	⑥
83 State test	①	②	③	④	⑤	⑥
84 District test	①	②	③	④	⑤	⑥
85 National mathematics education standards	①	②	③	④	⑤	⑥
86 Your experience in pre-service preparation	①	②	③	④	⑤	⑥
87 Students' special needs	①	②	③	④	⑤	⑥
88 Parents/community	①	②	③	④	⑤	⑥
89 Preparation of students for next grade or level	①	②	③	④	⑤	⑥

CLASSROOM INSTRUCTIONAL PREPARATION

For items 90-107, please indicate how well prepared you are now to:

	Not Well Prepared	Somewhat Prepared	Well Prepared	Very Well Prepared
90 Teach mathematics at your assigned level	①	②	③	④
91 Use/manage cooperative learning groups in mathematics	①	②	③	④
92 Integrate mathematics with other subjects	①	②	③	④
93 Provide mathematics instruction that meets mathematics standards (district, state, or national)	①	②	③	④
94 Use a variety of assessment strategies (including objective and open-ended formats)	①	②	③	④
95 Teach estimation strategies	①	②	③	④
96 Teach problem solving strategies	①	②	③	④
97 Select and/or adapt instructional materials to implement your written curriculum	①	②	③	④
98 Teach mathematics with the use of manipulative materials, such as counting blocks, geometric shapes, and so on	①	②	③	④
99 Teach students with physical disabilities	①	②	③	④
100 Help students document and evaluate their own mathematics work	①	②	③	④
101 Teach classes for students with diverse abilities	①	②	③	④
102 Teach mathematics to students from a variety of cultural backgrounds	①	②	③	④
103 Teach mathematics to students who have limited English proficiency	①	②	③	④
104 Teach students who have a learning disability which impacts mathematics learning	①	②	③	④
105 Encourage participation of females in mathematics	①	②	③	④
106 Encourage participation of minorities in mathematics	①	②	③	④
107 Involve parents in the mathematics education of their children	①	②	③	④

TEACHER OPINIONS

Please indicate your opinion about each of the statements below:

	Strongly Disagree	Disagree	Neutral / Undecided	Agree	Strongly Agree
108 Students learn mathematics best when they ask a lot of questions	①	②	③	④	⑤
109 Students master and retain mathematical algorithms more efficiently through repeated practice than through the use of applications and simulations	①	②	③	④	⑤
110 Calculator use should be incorporated only after the mastery of basic arithmetic facts	①	②	③	④	⑤
111 All students can learn challenging content in mathematics	①	②	③	④	⑤
112 Students learn mathematics best in classes with students of similar abilities	①	②	③	④	⑤
113 It is important for students to learn basic mathematics skills before solving problems	①	②	③	④	⑤
114 I really enjoy teaching mathematics	①	②	③	④	⑤
115 I am supported by colleagues to try out new ideas in teaching mathematics	①	②	③	④	⑤
116 I receive little support from the school administration for teaching mathematics	①	②	③	④	⑤
117 Mathematics teachers in this school regularly share ideas and materials	①	②	③	④	⑤
118 Mathematics teachers in this school regularly observe each other teaching classes	①	②	③	④	⑤
119 I have many opportunities to learn new things about mathematics or mathematics teaching in my present job	①	②	③	④	⑤
120 I am required to follow rules at this school that conflict with my best professional judgment about teaching and learning mathematics	①	②	③	④	⑤
121 Most mathematics teachers in this school contribute actively to making decisions about the mathematics curriculum	①	②	③	④	⑤
122 I have adequate time during the regular school week to work with my peers on mathematics curriculum or instruction	①	②	③	④	⑤
123 I have adequate curriculum materials available for mathematics instruction	①	②	③	④	⑤
124 Absenteeism is a problem in my class	①	②	③	④	⑤
125 Mobility of students in and out of our school is a problem	①	②	③	④	⑤

Professional Development in Mathematics

For items 126 - 137, please indicate the amount of time, in the last 24 months, you participated in each mathematics activity listed below. If you did not participate, indicate so by filling in the appropriate circle and continue on to the next item. If you did participate, please enter the amount of time you participated and then answer the additional questions concerning Time Span, Collegial Participation, Content Knowledge, Active Learning and Coherence for that same activity.

COHERENCE: Were these activities associated, integrated or coordinated with other PD offerings?

ACTIVE LEARNING: Did the professional development activity engage teachers in active forms of learning?

CONTENT KNOWLEDGE: Did the professional development activity have a focus on content knowledge?

COLLEGIAL PARTICIPATION: Did you attend with a group of teachers from your school or district?

TIME SPAN: Was this a single stand-alone workshop or did it involve multiple meetings that developed ideas and skills over time?

AMOUNT OF TIME: What was the total amount of time (clock hours) in the last 24 months that you spent in professional development activities that focused on:

-
- 126 How to implement state or national content standards
 - 127 How to implement new curriculum or instructional materials
 - 128 New methods of teaching
 - 129 In-depth study of mathematics content
 - 130 Meeting the needs of all students
 - 131 Multiple strategies for student assessment
 - 132 Educational technology
 - 133 Teacher network or study group (electronic or otherwise) on improving teaching
 - 134 Portfolio assessment training or scoring activity
 - 135 Extended institute or professional development program for teachers (cumulative 40 contact hours or more)
 - 136 Mentoring program
 - 137 Committee or task force

TEACHER CHARACTERISTICS

138 Please indicate your gender.

Female Male
 ① ①

139 Please indicate your ethnicity/race.

Indicate all that apply

- ① American Indian or Alaska Native
- ① Asian
- ② Black or African American
- ③ Hispanic or Latino
- ④ Native Hawaiian or Other Pacific Islander
- ⑤ White

140 How many years have you taught mathematics prior to this year?

	Less than 1 year	1 - 2 years	3 - 5 years	6 - 8 years	9 - 11 years	12 - 15 years	More than 15 years
	①	①	②	③	④	⑤	⑥

141 How long have you been assigned to teach at your current school?

	①	①	②	③	④	⑤	⑥
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142 What is the highest degree you hold?

	BA or BS	MA or MS	Multiple MA or MS	Ph.D. or Ed.D.	Other
	①	①	②	③	④

143 What was your major field of study for the bachelors degree?

- ① Elementary Education
- ① Middle School Education
- ② Mathematics Education
- ③ Mathematics
- ④ Mathematics Education **and** Mathematics
- ⑤ Other Disciplines (includes other Education fields, Science, History, English, Foreign Languages, etc.)

144 **If applicable**, what was your **major field** of study for the **highest degree you hold** beyond a bachelors degree?

- ① Elementary Education
- ① Middle School Education
- ② Mathematics Education
- ③ Mathematics
- ④ Mathematics Education **and** Mathematics
- ⑤ Other Disciplines (includes other Education fields, Science, History, English, Foreign Languages, etc.)

145 What type(s) of state certification do you currently have?

	①	①	②	③	④
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Indicate all that apply

- ① Emergency or Temporary Certification
- ① Elementary Grades Certification
- ② Middle Grades Certification
- ③ Secondary certification in a field **other** than mathematics
- ④ Secondary Mathematics Certification

FORMAL COURSE PREPARATION

Please indicate the number of *quarter or semester courses* that you have taken at the undergraduate or graduate level in each of the following areas:

		(Number of courses)									
		0	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15-16	17+
146	Refresher mathematics courses (e.g., algebra, geometry)	①	①	②	③	④	⑤	⑥	⑦	⑧	⑨
147	Advanced mathematics courses (e.g., calculus, statistics)	①	①	②	③	④	⑤	⑥	⑦	⑧	⑨
148	Mathematics Education	①	①	②	③	④	⑤	⑥	⑦	⑧	⑨

This is the end of Section I of the survey. Please continue on to complete Section II. Thank you.

Please provide the following information:
(Your name will be kept confidential.)

Name: _____

District: _____

School: _____

Date: _____