APPENDIX B

Survey Questionnaires

Science Program Questionnaire

Mathematics Program Questionnaire

Science Teacher Questionnaire

Mathematics Teacher Questionnaire

2012 NATIONAL SURVEY OF SCIENCE AND MATHEMATICS EDUCATION
SCIENCE PROGRAM QUESTIONNAIRE

This questionnaire asks a number of questions about "science teachers." In responding, unless otherwise specified, consider ALL teachers of science in your school, including self-contained teachers who teach science and other subjects to the same group of students.

1. Which of the following describe your position? [Select all that apply.]

□	Science department chair
□	Science lead teacher or coach
□	Regular classroom teacher
□	Principal
□	Assistant principal
□	Other (please specify: _____)

School Programs and Practices

2. ***[Presented only to schools that include self-contained teachers]***

Indicate whether each of the following programs and/or practices is currently being implemented in your school. [Select one on each row.]

	Yes	No
a. Students in self-contained classes receive science instruction from a science specialist *instead of* their regular teacher.	○	○
b. Students in self-contained classes receive science instruction from a science specialist *in addition* to their regular teacher.	○	○
c. Students in self-contained classes pulled out for remedial instruction in science.	○	○
d. Students in self-contained classes pulled out for enrichment in science.	○	○
e. Students in self-contained classes pulled out from science instruction for additional instruction in other content areas.	○	○

3. ***[Presented only to schools that include any grades 9–12]***

Indicate whether each of the following programs and/or practices is currently being implemented in your school. [Select one on each row.]

	Yes	No
a. Physics courses offered this school year or in alternating years, on or off site	○	○
b. Students go to a Career and Technical Education (CTE) Center for science and/or engineering instruction.	○	○
c. Science and/or engineering courses offered by telecommunications.	○	○
d. Students go to another K–12 school for science and/or engineering courses.	○	○
e. Students go to a college or university for science and/or engineering courses.	○	○

4. Which of the following are provided to teachers considered in need of special assistance in science teaching (for example: new teachers)? [Select all that apply.]

□	Seminars, classes, and/or study groups
□	Guidance from a formally designated mentor or coach
□	A higher level of supervision than for other teachers

5. Indicate whether your school does each of the following to enhance students' interest and/or achievement in science and/or engineering. [Select one on each row.]

	Yes	No
a. Holds family science and/or engineering nights	○	○
b. Offers after-school help in science and/or engineering (for example: tutoring)	○	○
c. Offers formal after-school programs for enrichment in science and/or engineering	○	○
d. Offers one or more science clubs	○	○
e. Offers one or more engineering clubs	○	○
f. Participates in a local or regional science and/or engineering fair	○	○
g. Has one or more teams participating in science competitions (for example: Science Olympiad)	○	○
h. Has one or more teams participating in engineering competitions (for example: Robotics)	○	○
i. Encourages students to participate in science and/or engineering summer programs or camps offered by community colleges, universities, museums, or science centers	○	○
j. Sponsors visits to business, industry, and/or research sites related to science and/or engineering	○	○
k. Sponsors meetings with adult mentors who work in science and/or engineering fields	○	○

Your State Standards

6. Please provide your opinion about each of the following statements in regard to your current state standards for science. [Select one on each row.]

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
a. State science standards have been thoroughly discussed by science teachers in this school	①	②	③	④	⑤
b. There is a school-wide effort to align science instruction with the state science standards	①	②	③	④	⑤
c. Most science teachers in this school teach to the state standards	①	②	③	④	⑤
d. Your district/diocese organizes science professional development based on state standards ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤

Science Courses Offered in Your School

7. ***[Presented only to schools that include grade 6]***

What types of science courses are offered to 6th grade classes in your school?

○	Single-discipline science courses (for example: life science)
○	Coordinated or Integrated science courses
○	Both single-discipline and coordinated or integrated science courses

8. ***[Presented only to schools that include grade 7]***
What types of science courses are offered to 7th grade classes in your school?

○	Single-discipline science courses (for example: life science)
○	Coordinated or Integrated science courses
○	Both single-discipline and coordinated or integrated science courses

9. ***[Presented only to schools that include grade 8]***
What types of science courses are offered to 8th grade classes in your school?

○	Single-discipline science courses (for example: life science)
○	Coordinated or Integrated science courses
○	Both single-discipline and coordinated or integrated science courses

10. ***[Presented only to schools that include any grades 9–12]***
Approximately how many grades 9–12 students in this school will **not** take a science course this year? [Enter your response as a whole number (for example: 1500); do not use a comma.]

_____

Science Courses Offered in Your School

[Questions 11–27 presented only to schools that include any grades 9–12; schools that do not include any of these grades skip to Q31]

This next set of questions asks about the number of sections and level of science courses offered in grades 9–12 in your school this year in each of the following categories:

- Coordinated or Integrated Science (including General Science and Physical Science)
- Earth/Space Science
- Life Sciences/Biology
- Environmental Science/Ecology (as a separate course)
- Chemistry
- Physics
- Engineering

11. Does your school offer one or more courses in Coordinated or Integrated science (including General Science and Physical Science) this school year in any of the grades 9–12?

○	Yes
○	No ***[Skip to Q13]***

12. How many sections of Coordinated or Integrated science courses (including General Science and Physical Science) are offered in your school this year at each of the following levels? [Enter each response as a whole number (for example: 15).]

a. Non-college prep _____
b. College prep, including honors _____

13. Does your school offer one or more courses in Earth/Space Science this school year in any of the grades 9–12?

○	Yes
○	No ***[Skip to Q15]***

14. How many sections of Earth/Space Science courses are offered in your school this year at each of the following levels? [Enter each response as a whole number (for example: 15).]

a. Non-college prep _____
b. 1st year college prep, including honors _____
c. 2nd year advanced, including Advanced Placement, International Baccalaureate, and concurrent college and high school credit/dual enrollment courses _____

15. Does your school offer one or more courses in Life Science/Biology this school year in any of the grades 9–12?

○	Yes
○	No ***[Skip to Q17]***

16. How many sections of Life Science/Biology courses are offered in your school this year at each of the following levels? [Enter each response as a whole number (for example: 15).]

a. Non-college prep _____
b. 1st year college prep, including honors _____
c. 2nd year advanced, including Advanced Placement, International Baccalaureate, and concurrent college and high school credit/dual enrollment courses _____

17. Does your school offer one or more courses in Environmental Science/Ecology this school year in any of the grades 9–12?

○	Yes
○	No ***[Skip to Q19]***

18. How many sections of Environmental Science/Ecology courses are offered in your school this year at each of the following levels? [Enter each response as a whole number (for example: 15).]

a. Non-college prep _____
b. 1st year college prep, including honors _____
c. 2nd year advanced, including Advanced Placement, International Baccalaureate, and concurrent college and high school credit/dual enrollment courses _____

19. Does your school offer one or more courses in Chemistry this school year in any of the grades 9–12?

○	Yes
○	No ***[Skip to Q21]***

20. How many sections of Chemistry courses are offered in your school this year at each of the following levels? [Enter each response as a whole number (for example: 15).]

a. Non-college prep _____
b. 1st year college prep, including honors _____
c. 2nd year advanced, including Advanced Placement, International Baccalaureate, and concurrent college and high school credit/dual enrollment courses _____

21. Does your school offer one or more courses in Physics this school year in any of the grades 9–12?

○	Yes
○	No ***[Skip to Q23]***

22. How many sections of Physics courses are offered in your school this year at each of the following levels? [Enter each response as a whole number (for example: 15).]

a. Non-college prep _____
b. 1st year college prep, including honors _____
c. 2nd year advanced, including Advanced Placement, International Baccalaureate, and concurrent college and high school credit/dual enrollment courses ____

23. Does your school offer one or more courses in Engineering this school year in any of the grades 9–12? Count courses that address such things as the nature of engineering, engineering design processes, technological systems, and technology and society. Do not include career-technical education (CTE) courses that cover such things as automotive repair, audio/video production, etc.

○	Yes
○	No ***[Skip to Q25]***

24. How many sections of Engineering courses are offered in your school this year at each of the following levels? [Enter each response as a whole number (for example: 15).]

a. Non-college prep _____
b. 1st year college prep, including honors _____
c. 2nd year advanced, including concurrent college and high school credit/dual enrollment courses _____

25. Does your school offer each of the following types of science courses that might qualify for college credit? (Include both courses that are offered every year and those offered in alternating years.) [Select one on each row.]

	Yes	**No**
a. Advanced Placement (AP) science courses	○	○
b. International Baccalaureate (IB) science courses	○	○
c. Concurrent college and high school credit/dual enrollment science courses	○	○

26. ***[Presented only to schools that answered "Yes" to Q25c]***
When are concurrent college and high school credit/dual enrollment science courses offered in this school?

○	Not offered this school year, but offered in alternating years
○	Offered this school year

27. ***[Q27a–e presented only to schools that answered "Yes" to Q25a; Q27f–h presented only to schools that answered "Yes" to Q25b]***

Is each of the following science courses offered in this school? [Select one on each row.]

	Not offered at all	Not offered this school year, but offered in alternating years	Offered this school year
a. AP Biology	○	○	○
b. AP Chemistry	○	○	○
c. AP Physics B	○	○	○
d. AP Physics C	○	○	○
e. AP Environmental Science	○	○	○
f. IB Biology	○	○	○
g. IB Chemistry	○	○	○
h. IB Physics	○	○	○

Science Requirements

28. ***[Presented only to schools that include grade 12]***

In order to graduate from this high school, how many years of grades 9–12 science are students required to take?

1 year	2 years	3 years	4 years
○	○	○	○

29. ***[Presented only to schools that include grade 12 and answered "Yes" to Q23]***

Does participation in Engineering courses count towards students' high school graduation requirements for science?

○	Yes
○	No

30. ***[Presented only to schools that include grade 12]***

How many years of science are required for entry into a four-year college or university in your state university system? If your state university system has multiple tiers, answer for the lowest tier that awards four-year degrees, not including community colleges that might include four-year programs.

1 year	2 years	3 years	4 years
○	○	○	○

Budget for Science Instruction

31. For this school, how much money was spent on each of the following during the most recently completed budget year? (If you don't know the exact amounts, please provide your best estimates.) [Enter each response as a whole dollar amount (for example: 1500); do not include commas or dollar signs.]

a. Consumable science supplies (for example: chemicals, living organisms, batteries) _____
b. Science equipment (non-consumable, non-perishable items such as microscopes, scales, etc., but not computers) _____
c. Software for science instruction _____

Influences on Science Instruction

32. Please rate the effect of each of the following on the quality of science instruction in your school. [Select one on each row.]

	Inhibits effective instruction		**Neutral or mixed**		**Promotes effective instruction**	**N/A or Don't Know**
a. District/Diocese science professional development policies and practices ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤	○
b. Time provided for teacher professional development in science	①	②	③	④	⑤	○
c. Importance that the school places on science	①	②	③	④	⑤	○
d. Public attitudes toward science instruction	①	②	③	④	⑤	○
e. Conflict between efforts to improve science instruction and other school and/or district/diocese initiatives	①	②	③	④	⑤	○
f. How science instructional resources are managed (for example: distributing and refurbishing materials)	①	②	③	④	⑤	○

33. In your opinion, how great a problem is each of the following for science instruction **in your school as a whole**? [Select one on each row.]

	Not a significant problem	**Somewhat of a problem**	**Serious problem**
a. Lack of science facilities (for example: lab tables, electric outlets, faucets and sinks in classrooms)	○	○	○
b. Inadequate funds for purchasing science equipment and supplies	○	○	○
c. Inadequate supply of science textbooks/modules	○	○	○
d. Inadequate materials for individualizing science instruction	○	○	○
e. Low student interest in science	○	○	○
f. Low student reading abilities	○	○	○
g. Lack of teacher interest in science	○	○	○
h. Inadequate teacher preparation to teach science	○	○	○
i. Insufficient time to teach science	○	○	○
j. Lack of opportunities for science teachers to share ideas	○	○	○
k. Inadequate science-related professional development opportunities	○	○	○
l. Interruptions for announcements, assemblies, and other school activities	○	○	○
m. Large class sizes	○	○	○
n. High student absenteeism	○	○	○
o. Inappropriate student behavior	○	○	○
p. Lack of parental support for science education	○	○	○
q. Community resistance to the teaching of "controversial" issues in science (for example: evolution, climate change)	○	○	○

Science Teacher Turnover

34. ***[Presented only to schools that include any grades 6–12]***

How many middle and/or high school science teachers who taught in your school last year (2010–11) did not return to teach science in your school this year (2011–12)? [Enter your response as a whole number (for example: 15). Please enter "0" if all teachers who taught science returned this school year.] _____ ***[If "0" Skip to Q36]***

35. ***[Presented only to schools that include any grades 6–12]***

How many of those teachers did not return for each of the following reasons? [Enter each response as a whole number (for example: 15). Please enter "0" for categories in which there were not any science teachers who did not return for that reason.]

a. Left voluntarily, including science teachers who moved to another department or school, left the profession, or retired _____
b. Were reassigned to another position, department, or school in the district/diocese _____
c. Were dismissed or not rehired for poor performance _____
d. Were dismissed or not rehired because of budget constraints _____

36. ***[Presented only to schools that include any grades 6–12]***

For the 2011–12 school year, how difficult was it to fill middle and/or high school science teacher vacancies in your school with fully qualified teachers?

○	There were no vacancies for science teachers ***[Skip to Q39]***
○	Easy
○	Somewhat difficult
○	Very difficult
○	Could not fill the vacancies

37. ***[Presented only to schools that include any grades 9–12]***

For the 2011–12 school year, were there particular science disciplines for which it was more difficult to fill vacancies with fully qualified teachers than others?

○	Yes
○	No ***[Skip to Q39]***

38. ***[Presented only to schools that include any grades 9–12]***

For the 2011–12 school year, how difficult was it to fill vacancies with fully qualified teachers of: [Select one on each row.]

	There were no vacancies for this discipline	**Easy**	**Somewhat difficult**	**Very difficult**	**Could not fill the vacancies**
a. Biology/Life science?	○	○	○	○	○
b. Chemistry?	○	○	○	○	○
c. Earth/Space science?	○	○	○	○	○
d. Physics?	○	○	○	○	○
e. A combination of science disciplines?	○	○	○	○	○

Science Professional Development Opportunities

39. This question is about in-service (professional development) programs offered by your school and/or district/diocese, possibly in conjunction with other organizations (for example: other school districts/dioceses, colleges or universities, museums, professional associations, commercial vendors).

In the last three years, has your school and/or district/diocese offered in-service **workshops** specifically focused on science or science teaching?

○	Yes
○	No ***[Skip to Q41]***

40. Please indicate the extent to which in-service **workshops** offered by your school and/or district/diocese **in the last three years** addressed deepening teacher understanding of each of the following: [Select one on each row.]

	Not at all		**Somewhat**		**To a great extent**
a. Science content	①	②	③	④	⑤
b. State science standards	①	②	③	④	⑤
c. How to use particular science instructional materials (for example: textbooks or modules)	①	②	③	④	⑤
d. How students think about various science ideas	①	②	③	④	⑤
e. How to monitor student understanding during science instruction	①	②	③	④	⑤
f. How to adapt science instruction to address student misconceptions	①	②	③	④	⑤
g. How to use technology in science instruction	①	②	③	④	⑤
h. How to use investigation-oriented science teaching strategies	①	②	③	④	⑤
i. How to teach science to students who are English language learners	①	②	③	④	⑤
j. How to provide alternative science learning experiences for students with special needs	①	②	③	④	⑤

41. In the last three years, has your school offered **teacher study groups** where teachers meet on a regular basis to discuss teaching and learning of science, and possibly other content areas as well (sometimes referred to as Professional Learning Communities, PLCs, or lesson study)?

○	Yes
○	No ***[Skip to Q53]***

42. ***[Presented only to schools that include any grades K–5]***

Are teachers of grades K-5 science classes required to participate in these science-focused **teacher study groups**?

○	Yes
○	No

43. ***[Presented only to schools that include any grades 6–8]***
Are teachers of grades 6-8 science classes required to participate in these science-focused **teacher study groups**?

○	Yes
○	No

44. ***[Presented only to schools that include any grades 9–12]***
Are teachers of grades 9-12 science classes required to participate in these science-focused **teacher study groups**?

○	Yes
○	No

45. Has your school specified a schedule for when these science-focused **teacher study groups** are expected to meet?

○	Yes
○	No ***[Skip to Q48]***

46. Over what period of time were these science-focused **teacher study groups** typically expected to meet?

○	The entire school year
○	One semester
○	Less than one semester

47. How often have these science-focused **teacher study groups** typically been expected to meet?

○	Less than once a month
○	Once a month
○	Twice a month
○	More than twice a month

48. Which of the following describe the typical science-focused **teacher study groups** in this school? [Select all that apply.]

□	Organized by grade level
□	Include teachers from multiple grade levels
□	Limited to teachers from this school
□	Include teachers from other schools in the district/diocese ***[Not presented to non-Catholic private schools]***
□	Include teachers from other schools outside of your district/diocese
□	Include school and/or district/diocese administrators
□	Include parents/guardians or other community members
□	Include higher education faculty or other "consultants"

49. Which of the following describe the typical science-focused **teacher study groups** in this school? [Select all that apply.]

□	Teachers engage in science investigations.
□	Teachers plan science lessons together.
□	Teachers analyze student science assessment results.
□	Teachers analyze classroom artifacts (for example: student work samples).
□	Teachers analyze science instructional materials (for example: textbooks or modules).

50. To what extent have these science-focused **teacher study groups** addressed deepening teacher understanding of each of the following? [Select one on each row.]

	Not at all		**Somewhat**		**To a great extent**
a. Science content	①	②	③	④	⑤
b. State science standards	①	②	③	④	⑤
c. How to use particular science instructional materials (for example: textbooks or modules)	①	②	③	④	⑤
d. How students think about various science ideas	①	②	③	④	⑤
e. How to monitor student understanding during science instruction	①	②	③	④	⑤
f. How to adapt science instruction to address student misconceptions	①	②	③	④	⑤
g. How to use technology in science instruction	①	②	③	④	⑤
h. How to use investigation-oriented science teaching strategies	①	②	③	④	⑤
i. How to teach science to students who are English language learners	①	②	③	④	⑤
j. How to provide alternative science learning experiences for students with special needs	①	②	③	④	⑤

51. Have there been designated leaders for these science-focused **teacher study groups**?

○	Yes
○	No ***[Skip to Q53]***

52. The designated leaders of these science-focused **teacher study groups** were from: [Select all that apply.]

□	This school
□	Elsewhere in this district/diocese ***[Not presented to non-Catholic private schools]***
□	College or University
□	External consultants
□	Other (please specify: _____)

53. Thinking about last school year, which of the following were used to provide teachers in this school with time for in-service (professional development) workshops/teacher study groups *that included a focus on science content and/or science instruction*, regardless of whether they were offered by your school and/or district/diocese? [Select all that apply.]

□	Early dismissal and/or late start for students
□	Professional days/teacher work days during the students' school year
□	Professional days/teacher work days before and/or after the students' school year
□	Common planning time for teachers
□	Substitute teachers to cover teachers' classes while they attend professional development
□	None of the above

54. Do any teachers in your school have access to one-on-one "coaching" focused on improving their science instruction?

○	Yes
○	No ***[Skip to End]***

55. ***[Presented only to schools that include any grades K–5]***
Are teachers of grades K-5 science classes required to receive one-on-one science-focused coaching?

○	Yes
○	No

56. ***[Presented only to schools that include any grades 6–8]***
Are teachers of grades 6-8 science classes required to receive one-on-one science-focused coaching?

○	Yes
○	No

57. ***[Presented only to schools that include any grades 9–12]***
Are teachers of grades 9-12 science classes required to receive one-on-one science-focused coaching?

○	Yes
○	No

58. To what extent is science-focused one-on-one coaching in your school provided by each of the following? [Select one on each row.]

	Not at all		**Somewhat**		**To a great extent**
a. The principal of your school	①	②	③	④	⑤
b. An assistant principal at your school	①	②	③	④	⑤
c. District/Diocese administrators including science supervisors/coordinators ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤
d. Teachers/coaches who do not have classroom teaching responsibilities	①	②	③	④	⑤
e. Teachers/coaches who have part-time classroom teaching responsibilities	①	②	③	④	⑤
f. Teachers/coaches who have full-time classroom teaching responsibilities	①	②	③	④	⑤

Thank you!

2012 NATIONAL SURVEY OF SCIENCE AND MATHEMATICS EDUCATION
MATHEMATICS PROGRAM QUESTIONNAIRE

This questionnaire asks a number of questions about "mathematics teachers." In responding, unless otherwise specified, consider ALL teachers of mathematics in your school, including self-contained teachers who teach mathematics and other subjects to the same group of students.

1. Which of the following describe your position? [Select all that apply.]

□	Mathematics department chair
□	Mathematics lead teacher or coach
□	Regular classroom teacher
□	Principal
□	Assistant principal
□	Other (please specify: _____)

School Programs and Practices

2. ***[Presented only to schools that include self-contained teachers]***
Indicate whether each of the following programs and/or practices is currently being implemented in your school. [Select one on each row.]

	Yes	No
a. Students in self-contained classes receive mathematics instruction from a mathematics specialist *instead of* their regular teacher.	○	○
b. Students in self-contained classes receive mathematics instruction from a mathematics specialist *in addition* to their regular teacher.	○	○
c. Students in self-contained classes pulled out for remedial instruction in mathematics.	○	○
d. Students in self-contained classes pulled out for enrichment in mathematics.	○	○
e. Students in self-contained classes pulled out from mathematics instruction for additional instruction in other content areas.	○	○

3. ***[Presented only to schools that include any grades 9–12]***
Indicate whether each of the following programs and/or practices is currently being implemented in your school. [Select one on each row.]

	Yes	No
a. Algebra 1 course offered over two years or as two separate block courses (for example: Algebra A and Algebra B)	○	○
b. Calculus courses (beyond pre-Calculus) offered this school year or in alternating years, on or off site	○	○
c. Students go to a Career and Technical Education (CTE) Center for mathematics instruction	○	○
d. Mathematics courses offered by telecommunications	○	○
e. Students go to another K–12 school for mathematics courses	○	○
f. Students go to a college or university for mathematics courses	○	○

4. Which of the following are provided to teachers considered in need of special assistance in mathematics teaching (for example: new teachers)? [Select all that apply.]

□	Seminars, classes, and/or study groups
□	Guidance from a formally designated mentor or coach
□	A higher level of supervision than for other teachers

5. Indicate whether your school does each of the following to enhance students' interest and/or achievement in mathematics. [Select one on each row.]

		Yes	No
a.	Holds family math nights	○	○
b.	Offers after-school help in mathematics (for example: tutoring)	○	○
c.	Offers formal after-school programs for enrichment in mathematics	○	○
d.	Offers one or more mathematics clubs	○	○
e.	Participates in a local or regional mathematics fair	○	○
f.	Has one or more teams participating in mathematics competitions (for example: Math Counts)	○	○
g.	Encourages students to participate in mathematics summer programs or camps offered by community colleges, universities, museums or mathematics centers	○	○
h.	Sponsors visits to business, industry, and/or research sites related to mathematics	○	○
i.	Sponsors meetings with adult mentors who work in mathematics fields	○	○

Your State Standards

6. Please provide your opinion about each of the following statements in regard to your current state standards for mathematics. [Select one on each row.]

		Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
a.	State mathematics standards have been thoroughly discussed by mathematics teachers in this school	①	②	③	④	⑤
b.	There is a school-wide effort to align mathematics instruction with the state mathematics standards	①	②	③	④	⑤
c.	Most mathematics teachers in this school teach to the state standards	①	②	③	④	⑤
d.	Your district/diocese organizes mathematics professional development based on state standards ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤

Student Enrollment in Mathematics Courses

7. ***[Presented only to schools that include grade 8]***
Approximately how many of this year's 8th grade students will have completed Algebra 1 prior to 9th grade? [Enter your response as a whole number (for example: 15).] _____

8. ***[Presented only to schools that include grade 8]***
Approximately how many of this year's 8th grade students will have completed Geometry prior to 9th grade? [Enter your response as a whole number (for example: 15).] _____

9. ***[Presented only to schools that include any grades 9–12]***
Approximately how many grades 9-12 students in this school will **not** take a mathematics course this year? [Enter your response as a whole number (for example: 1500); do not use a comma.]
_____

Mathematics Courses Offered in Your School

[Questions 10–16 presented only to schools that include any grades 9–12; schools that do not include any of these grades skip to Q19]

10. What types of mathematics courses are offered in your school this year? [Select all that apply.]

□	Single-subject mathematics courses (for example: Algebra, Geometry)
□	Integrated mathematics courses

11. How many sections of courses in each of the following categories will be offered to grades 9-12 students in this school this year? [Enter each response as a whole number (for example: 15).]

	Number of sections
a. Non-college prep mathematics courses *Example courses*: Developmental Math; High School Arithmetic; Remedial Math; General Math; Vocational Math; Consumer Math; Basic Math; Business Math; Career Math; Practical Math; Essential Math; Pre-Algebra; Introductory Algebra; Algebra 1 Part 1; Algebra 1A; Math A; Basic Geometry; Informal Geometry; Practical Geometry	
b. Formal/College-prep Mathematics Level 1 courses *Example courses:* Algebra 1; Integrated Math 1; Unified Math I; Algebra 1 Part 2; Algebra 1B; Math B	
c. Formal/College-prep Mathematics Level 2 courses *Example courses:* Geometry; Plane Geometry; Solid Geometry; Integrated Math 2; Unified Math II; Math C	
d. Formal/College-prep Mathematics Level 3 courses *Example courses:* Algebra 2; Intermediate Algebra; Algebra and Trigonometry; Advanced Algebra; Integrated Math 3; Unified Math III	
e. Formal/College-prep Mathematics Level 4 courses *Example courses:* Algebra 3; Trigonometry; Pre-Calculus; Analytic/Advanced Geometry; Elementary Functions; Integrated Math 4, Unified Math IV; Calculus (not including college level/AP); any other College Prep Senior Math with Algebra 2 as a prerequisite	
f. Mathematics courses that might qualify for college credit *Example courses:* Advanced Placement Calculus (AB, BC); Advanced Placement Statistics; IB Mathematics standard level; IB Mathematics higher level; concurrent college and high school credit/dual enrollment	

12. Does this school offer one or more courses focused specifically on probability and/or statistics? (Include both courses that are offered every year and those offered in alternating years.)

○	Yes
○	No ***[Skip to Q14]***

13. What probability and/or statistics courses does this school offer? [Select all that apply.]

□	Probability and Statistics combined
□	Probability
□	Statistics

14. Does your school offer each of the following types of mathematics courses that might qualify for college credit? (Include both courses that are offered every year and those offered in alternating years.) [Select one on each row.]

	Yes	No
a. Advanced Placement (AP) mathematics courses	○	○
b. International Baccalaureate (IB) mathematics courses	○	○
c. Concurrent college and high school credit/dual enrollment mathematics courses	○	○

15. ***[Presented only to schools that answered "Yes" to Q14c]***

When are concurrent college and high school credit/dual enrollment mathematics courses offered in this school?

○	Not offered this school year, but offered in alternating years
○	Offered this school year

16. ***[Q16a–c presented only to schools that answered "Yes" to Q14a; Q16d–g presented only to schools that answered "Yes" to Q14b]***

Is each of the following mathematics courses offered in this school? [Select one on each row.]

	Not offered at all	Not offered this school year, but offered in alternating years	Offered this school year
a. AP Calculus AB	○	○	○
b. AP Calculus BC	○	○	○
c. AP Statistics	○	○	○
d. IB Mathematical studies standard level	○	○	○
e. IB Mathematics standard level	○	○	○
f. IB Mathematics higher level	○	○	○
g. IB Further mathematics standard level	○	○	○

Mathematics Requirements

17. ***[Presented only to schools that include grade 12]***

In order to graduate from this high school, how many years of grades 9–12 mathematics are students required to take?

1 year	2 years	3 years	4 years
○	○	○	○

18. ***[Presented only to schools that include grade 12]***

How many years of mathematics are required for entry into a four-year college or university in your state university system? If your state university system has multiple tiers, answer for the lowest tier that awards four-year degrees, not including community colleges that might include four-year programs.

1 year	2 years	3 years	4 years
○	○	○	○

Budget for Mathematics Instruction

19. For this school, how much money was spent on each of the following during the most recently completed budget year? (If you don't know the exact amount, please provide your best estimates.) [Enter each response as a whole dollar amount (for example: 1500); do not include commas or dollar signs.]

a. Consumable supplies for mathematics instruction (for example: graph paper) _____
b. Non-consumable items for mathematics instruction such as calculators, protractors, manipulatives, etc. (Do not include computers) _____
c. Software specific to mathematics instruction (for example: dynamic geometry software) _____

Influences on Mathematics Instruction

20. Please rate the effect of each of the following on the quality of mathematics instruction in your school. [Select one on each row.]

	Inhibits effective instruction		**Neutral or mixed**		**Promotes effective instruction**	**N/A or Don't Know**
a. District/Diocese mathematics professional development policies and practices ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤	○
b. Time provided for teacher professional development in mathematics	①	②	③	④	⑤	○
c. Importance that the school places on mathematics	①	②	③	④	⑤	○
d. Public attitudes toward mathematics instruction	①	②	③	④	⑤	○
e. Conflict between efforts to improve mathematics instruction and other school and/or district/diocese initiatives	①	②	③	④	⑤	○
f. Equipment and supplies and/or manipulatives for teaching mathematics (for example: materials for students to draw, cut and build in order to make sense of problems)	①	②	③	④	⑤	○

21. In your opinion, how great a problem is each of the following for mathematics instruction **in your school as a whole**? [Select one on each row.]

	Not a significant problem	Somewhat of a problem	Serious problem
a. Inadequate funds for purchasing mathematics equipment and supplies	○	○	○
b. Inadequate supply of mathematics textbooks/programs	○	○	○
c. Inadequate materials for individualizing mathematics instruction	○	○	○
d. Low student interest in mathematics	○	○	○
e. Low student reading abilities	○	○	○
f. Lack of teacher interest in mathematics	○	○	○
g. Inadequate teacher preparation to teach mathematics	○	○	○
h. Insufficient time to teach mathematics	○	○	○
i. Lack of opportunities for mathematics teachers to share ideas	○	○	○
j. Inadequate mathematics-related professional development opportunities	○	○	○
k. Interruptions for announcements, assemblies, and other school activities	○	○	○
l. Large class sizes	○	○	○
m. High student absenteeism	○	○	○
n. Inappropriate student behavior	○	○	○
o. Lack of parental support for mathematics education	○	○	○

Mathematics Teacher Turnover

22. ***[Presented only to schools that include any grades 6–12]***

How many middle and/or high school mathematics teachers who taught in your school last year (2010–11) did not return to teach mathematics in your school this year (2011–12)? [Enter your response as a whole number (for example: 15). Please enter "0" if all teachers who taught mathematics returned this school year.] _____ ***[If "0" Skip to Q24]***

23. ***[Presented only to schools that include any grades 6–12]***

How many of those teachers did not return for each of the following reasons? [Enter each response as a whole number (for example: 15). Please enter "0" for categories in which there were not any mathematics teachers who did not return for that reason.]

e. Left voluntarily, including mathematics teachers who moved to another department or school, left the profession, or retired _____
f. Were reassigned to another position, department, or school in the district/diocese _____
g. Were dismissed or not rehired for poor performance _____
h. Were dismissed or not rehired because of budget constraints _____

24. ***[Presented only to schools that include any grades 6–12]***

For the 2011–12 school year, how difficult was it to fill middle and/or high school mathematics teacher vacancies in your school with fully qualified teachers?

○	There were no vacancies for mathematics teachers
○	Easy
○	Somewhat difficult
○	Very difficult
○	Could not fill the vacancies

Mathematics Professional Development Opportunities

25. This question is about in-service (professional development) programs offered by your school and/or district/diocese, possibly in conjunction with other organizations (for example: other school districts/dioceses, colleges or universities, museums, professional associations, commercial vendors).

In the last three years, has your school and/or district/diocese offered in-service **workshops** specifically focused on mathematics or mathematics teaching?

○	Yes
○	No ***[Skip to Q27]***

26. Please indicate the extent to which in-service **workshops** offered by your school and/or district/diocese **in the last three years** addressed deepening teacher understanding of each of the following: [Select one on each row.]

	Not at all		**Somewhat**		**To a great extent**
a. Mathematics content	①	②	③	④	⑤
b. State mathematics standards	①	②	③	④	⑤
c. How to use particular mathematics instructional materials (for example: textbooks or programs)	①	②	③	④	⑤
d. How students think about various mathematical ideas	①	②	③	④	⑤
e. How to monitor student understanding during mathematics instruction	①	②	③	④	⑤
f. How to adapt mathematics instruction to address student misconceptions	①	②	③	④	⑤
g. How to use technology in mathematics instruction	①	②	③	④	⑤
h. How to use investigation-oriented tasks in mathematics instruction	①	②	③	④	⑤
i. How to teach mathematics to students who are English language learners	①	②	③	④	⑤
j. How to provide alternative mathematics learning experiences for students with special needs	①	②	③	④	⑤

27. **In the last three years**, has your school offered **teacher study groups** where teachers meet on a regular basis to discuss teaching and learning of mathematics, and possibly other content areas as well (sometimes referred to as Professional Learning Communities, PLCs, or lesson study)?

○	Yes
○	No ***[Skip to Q39]***

28. ***[Presented only to schools that include any grades K–5]***
Are teachers of grades K-5 mathematics classes required to participate in these mathematics-focused **teacher study groups**?

○	Yes
○	No

29. ***[Presented only to schools that include any grades 6–8]***
Are teachers of grades 6-8 mathematics classes required to participate in these mathematics-focused **teacher study groups**?

○	Yes
○	No

30. ***[Presented only to schools that include any grades 9–12]***
Are teachers of grades 9-12 mathematics classes required to participate in these mathematics - focused **teacher study groups**?

○	Yes
○	No

31. Has your school specified a schedule for when these mathematics-focused **teacher study groups** are expected to meet?

○	Yes
○	No ***[Skip to Q34]***

32. Over what period of time were these mathematics-focused **teacher study groups** typically expected to meet?

○	The entire school year
○	One semester
○	Less than one semester

33. How often have these mathematics-focused **teacher study groups** typically been expected to meet?

○	Less than once a month
○	Once a month
○	Twice a month
○	More than twice a month

34. Which of the following describe the typical mathematics-focused **teacher study groups** in this school? [Select all that apply.]

□	Organized by grade level
□	Include teachers from multiple grade levels
□	Limited to teachers from this school
□	Include teachers from other schools in the district/diocese ***[Not presented to non-Catholic private schools]***
□	Include teachers from other schools outside of your district/diocese
□	Include school and/or district/diocese administrators
□	Include parents/guardians or other community members
□	Include higher education faculty or other "consultants"

35. Which of the following describe the typical mathematics-focused **teacher study groups** in this school? [Select all that apply.]

□	Teachers engage in mathematics investigations.
□	Teachers plan mathematics lessons together.
□	Teachers analyze student mathematics assessment results.
□	Teachers analyze classroom artifacts (for example: student work samples).
□	Teachers analyze mathematics instructional materials (for example: textbooks or programs).

36. To what extent have these mathematics-focused **teacher study groups** addressed deepening teacher understanding of each of the following? [Select one on each row.]

	Not at all		**Somewhat**		**To a great extent**
a. Mathematics content	①	②	③	④	⑤
b. State mathematics standards	①	②	③	④	⑤
c. How to use particular mathematics instructional materials (for example: textbooks or programs)	①	②	③	④	⑤
d. How students think about various mathematical ideas	①	②	③	④	⑤
e. How to monitor student understanding during mathematics instruction	①	②	③	④	⑤
f. How to adapt mathematics instruction to address student misconceptions	①	②	③	④	⑤
g. How to use technology in mathematics instruction	①	②	③	④	⑤
h. How to use investigation-oriented tasks in mathematics instruction	①	②	③	④	⑤
i. How to teach mathematics to students who are English language learners	①	②	③	④	⑤
j. How to provide alternative mathematics learning experiences for students with special needs	①	②	③	④	⑤

37. Have there been designated leaders for these mathematics-focused **teacher study groups**?

○	Yes
○	No ***[Skip to Q39]***

38. The designated leaders of these mathematics-focused **teacher study groups** were from: [Select all that apply.]

□	This school
□	Elsewhere in this district/diocese ***[Not presented to non-Catholic private schools]***
□	College or University
□	External consultants
□	Other (please specify: _____)

39. Thinking about last school year, which of the following were used to provide teachers in this school with time for in-service (professional development) workshops/teacher study groups *that included a focus on mathematics content and/or mathematics instruction*, regardless of whether they were offered by your school and/or district/diocese? [Select all that apply.]

□	Early dismissal and/or late start for students
□	Professional days/teacher work days during the students' school year
□	Professional days/teacher work days before and/or after the students' school year
□	Common planning time for teachers
□	Substitute teachers to cover teachers' classes while they attend professional development
□	None of the above

40. Do any teachers in your school have access to one-on-one "coaching" focused on improving their mathematics instruction?

○	Yes
○	No ***[Skip to End]***

41. ***[Presented only to schools that include any grades K–5]***
Are teachers of grades K-5 mathematics classes required to receive one-on-one mathematics-focused coaching?

○	Yes
○	No

42. ***[Presented only to schools that include any grades 6–8]***
Are teachers of grades 6-8 mathematics classes required to receive one-on-one mathematics-focused coaching?

○	Yes
○	No

43. ***[Presented only to schools that include any grades 9–12]***
Are teachers of grades 9-12 mathematics classes required to receive one-on-one mathematics-focused coaching?

○	Yes
○	No

44. To what extent is one-on-one mathematics-focused coaching in your school provided by each of the following? [Select one on each row.]

	Not at all		**Somewhat**		**To a great extent**
a. The principal of your school	①	②	③	④	⑤
b. An assistant principal at your school	①	②	③	④	⑤
c. District/Diocese administrators including mathematics supervisors/coordinators ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤
d. Teachers/coaches who do not have classroom teaching responsibilities	①	②	③	④	⑤
e. Teachers/coaches who have part-time classroom teaching responsibilities	①	②	③	④	⑤
f. Teachers/coaches who have full-time classroom teaching responsibilities	①	②	③	④	⑤

Thank you!

2012 NATIONAL SURVEY OF SCIENCE AND MATHEMATICS EDUCATION
SCIENCE TEACHER QUESTIONNAIRE

Section A. Teacher Background and Opinions

1. How many years have you taught prior to this school year: [Enter each response as a whole number (for example: 15).]

a. any subject at the K-12 level? _____
b. science at the K-12 level? _____
c. at this school, any subject? _____

2. At what grade levels do you currently teach science? [Select all that apply.]

□	K-5
□	6-8
□	9-12
□	You do not currently teach science

3. ***[Presented to self-contained teachers only]***

Which best describes the science instruction provided to the entire class?

- Do not consider pull-out instruction that some students may receive for remediation or enrichment.
- Do not consider instruction provided to individual or small groups of students, for example by an English-language specialist, special educator, or teacher assistant.

○	This class receives science instruction ***only*** from you. ***[Presented only to teachers who answered in Q2 that they teach science]***
○	This class receives science instruction from you and another teacher (for example: a science specialist or a teacher you team with). ***[Presented only to teachers who answered in Q2 that they teach science]***

4. ***[Presented to self-contained teachers only]***

Which best describes your science teaching?

○	I teach science all or most days, every week of the year.
○	I teach science every week, but typically three or fewer days each week.
○	I teach science some weeks, but typically not every week. ***[Skip to Q6]***

5. ***[Presented to self-contained teachers only]***

In a typical week, how many days do you teach lessons on each of the following subjects and how many minutes per week are spent on each subject? [Enter each response as a whole number (for example: 5, 150).]

	Number of days per week	Total number of minutes per week
a. Mathematics		
b. Science		
c. Social Studies		
d. Reading/Language Arts		

6. ***[Presented to self-contained teachers only]***

In a typical year, how many weeks do you teach lessons on each of the following subjects and how many minutes per week are spent on each subject? [Enter each response as a whole number (for example: 36, 150).]

	Number of weeks per year	Average number of minutes per week when taught
a. Mathematics		
b. Science		
c. Social Studies		
d. Reading/Language Arts		

7. ***[Presented to non-self-contained teachers only]***

In a typical week, how many different classes of each of the following do you teach?

- If you meet with the *same class of students* multiple times per week, count that class only once.
- If you teach the *same science or engineering course* to multiple classes of students, count each class separately.
- Select one on each row.

	0	1	2	3	4	5	6	7	8	9	10
Science (may include some engineering content)	○	○	○	○	○	○	○	○	○	○	○
Engineering (may include some science content)	○	○	○	○	○	○	○	○	○	○	○

8. ***[Presented to non-self-contained teachers only]***

For each science class you teach, select the course type and enter the number of students enrolled. Enter the classes in the order that you teach them. For teachers on an alternating day block schedule, please order your classes starting with the first class you teach this week. [Select one course type on each row and enter the number of students as a whole number (for example: 25).]

Class	Course Type	Number of Students
Your 1st science class:		
Your 2nd science class:		
…		
Your Nth science class:		

Course Type List	
1	Science (Grades K - 5)
2	Life Science (Grades 6 - 8)
3	Earth Science (Grades 6 - 8)
4	Physical Science (Grades 6 - 8)
5	General or Integrated Science (Grades 6 - 8)
6	Coordinated or Integrated Science including General Science and Physical Science (Grades 9 - 12)
7	Earth/Space Science (Grades 9 - 12)
8	Life Science/Biology (Grades 9 - 12)
9	Environmental Science/Ecology (Grades 9 - 12)
10	Chemistry (Grades 9 - 12)
11	Physics (Grades 9 - 12)

9. ***[Presented to non-self-contained grades 9–12 teachers only]***

For each grades 9-12 science class you teach, select the level that best describes the content addressed in that class.

- Use the descriptions below to help identify the level.
- Select one on each row.

Level	Description
Non-college Prep	A course that does not count towards the entrance requirements of a 4-year college. For example: Life Science.
1st Year College Prep, Including Honors	The first course in a discipline that counts towards the entrance requirements of a 4-year college. For example: Biology, Chemistry I.
2nd Year Advanced	A course typically taken after a 1st year college prep course. For example: Anatomy and Physiology, Advanced Chemistry, Physics II. Include Advanced Placement, International Baccalaureate, and concurrent college and high school credit/dual enrollment.

Class	Course Type	Non-college Prep	1st Year College Prep, Including Honors	2nd Year Advanced
Your 1st science class:	[*course type(s) teacher selected in Q8*]	○	○	○
Your 2nd science class:		○	○	○
…				
Your Nth science class:		○	○	○

10. ***[Presented to non-self-contained teachers only]***

Later in this questionnaire, we will ask you questions about your randomly selected science class, which you indicated was [*level and course type teacher selected in Q8/9*]. What is your school's title for this course? _____

11. Have you been awarded one or more bachelor's and/or graduate degrees in the following fields? (With regard to bachelor's degrees, count only areas in which you majored.) [Select one on each row.]

	Yes	No
a. Education, including science education	○	○
b. Natural Sciences and/or Engineering	○	○
c. Other, please specify _____	○	○

12. ***[Presented only to teachers that answered "Yes" to Q11a]***

What type of education degree do you have? (With regard to bachelor's degrees, count only areas in which you majored.) [Select all that apply.]

□	Elementary Education
□	Mathematics Education
□	Science Education
□	Other Education, please specify. _____

13. ***[Presented only to teachers that answered "Yes" to Q11b]***

What type of natural science and/or engineering degree do you have? (With regard to bachelor's degrees, count only areas in which you majored.) [Select all that apply.]

□	Biology/Life Science
□	Chemistry
□	Earth/Space Science
□	Engineering
□	Environmental Science/Ecology
□	Physics
□	Other natural science, please specify _____

14. Did you complete any of the following types of biology/life science courses at the undergraduate or graduate level? [Select one on each row.]

		Yes	**No**
a.	General/introductory biology/life science courses (for example: Biology I, Introduction to Biology)	○	○
b.	Biology/life science courses beyond the general/introductory level	○	○
c.	Biology/life science education courses	○	○

15. ***[Presented only to teachers that answered "Yes" to Q14b]***

Please indicate which of the following biology/life science courses you completed (beyond a general/introductory course) at the undergraduate or graduate level. [Select all that apply.]

□	Anatomy/Physiology
□	Biochemistry
□	Botany
□	Cell Biology
□	Ecology
□	Evolution
□	Genetics
□	Microbiology
□	Zoology
□	Other biology/life science beyond the general/introductory level

16. Did you complete any of the following types of chemistry courses at the undergraduate or graduate level? [Select one on each row.]

		Yes	**No**
a.	General/introductory chemistry courses (for example: Chemistry I, Introduction to Chemistry)	○	○
b.	Chemistry courses beyond the general/introductory level	○	○
c.	Chemistry education courses	○	○

17. ***[Presented only to teachers that answered "Yes" to Q16b]***

Please indicate which of the following chemistry courses you completed (beyond a general/introductory course) at the undergraduate or graduate level. [Select all that apply.]

□	Analytical Chemistry
□	Biochemistry
□	Inorganic Chemistry
□	Organic Chemistry
□	Physical Chemistry
□	Quantum Chemistry
□	Other chemistry beyond the general/introductory level

18. Did you complete any of the following types of physics courses at the undergraduate or graduate level? [Select one on each row.]

	Yes	No
a. General/introductory physics courses (for example: Physics I, Introduction to Physics)	○	○
b. Physics courses beyond the general/introductory level	○	○
c. Physics education courses	○	○

19. ***[Presented only to teachers that answered "Yes" to Q18b]***
Please indicate which of the following physics courses you completed (beyond a general/introductory course) at the undergraduate or graduate level. [Select all that apply.]

□	Electricity and Magnetism
□	Heat and Thermodynamics
□	Mechanics
□	Modern or Quantum Physics
□	Nuclear Physics
□	Optics
□	Other physics beyond the general/introductory level

20. Did you complete any of the following types of Earth/space science courses at the undergraduate or graduate level? [Select one on each row.]

	Yes	No
a. General/introductory Earth/space science courses (for example: Earth Science I, Introduction to Earth Science)	○	○
b. Earth/space science courses beyond the general/introductory level	○	○
c. Earth/space science education courses	○	○

21. ***[Presented only to teachers that answered "Yes" to Q20b]***
Please indicate which of the following Earth/space science courses you completed (beyond a general/introductory course) at the undergraduate or graduate level. [Select all that apply.]

□	Astronomy
□	Geology
□	Meteorology
□	Oceanography
□	Physical Geography
□	Other Earth/space science beyond the general/introductory level

22. Did you complete any of the following types of environmental science courses at the undergraduate or graduate level? [Select one on each row.]

	Yes	No
a. General/introductory environmental science courses (for example: Environmental Science I, Introduction to Environmental Science)	○	○
b. Environmental science courses beyond the general/introductory level	○	○
c. Environmental science education courses	○	○

23. ***[Presented only to teachers that answered "Yes" to Q22b]***

Please indicate which of the following environmental science courses you completed (beyond a general/introductory course) at the undergraduate or graduate level. [Select all that apply.]

□	Conservation Biology
□	Ecology
□	Forestry
□	Hydrology
□	Oceanography
□	Toxicology
□	Other environmental science beyond the general/introductory level

24. Did you complete one or more engineering courses at the undergraduate or graduate level?

○	Yes
○	No

25. ***[Presented only to teachers that answered "Yes" to Q24b]***

Please indicate which of the following types of engineering courses you completed at the undergraduate or graduate level. [Select all that apply.]

□	Aerospace Engineering
□	Bioengineering/Biomedical Engineering
□	Chemical Engineering
□	Civil Engineering
□	Computer Engineering
□	Electrical Engineering
□	Industrial/Manufacturing Engineering
□	Mechanical Engineering
□	Other types of engineering courses

26. For each of the following areas, indicate the number of semester and/or quarter courses you completed.

- Count *courses* **not** credit hours.
- Include courses taken at the graduate or undergraduate level, as well as courses for which you received college credit while you were in high school.
- Count each course taken in high school for college credit as a one semester college course.
- Count courses that lasted multiple semesters or quarters as multiple courses.
- If your transcripts are not available, provide your best estimates.
- Enter your responses as whole numbers (for example: 3). You may either enter 0 (zero) or leave the box empty wherever applicable.

	Number of SEMESTER college courses	**Number of QUARTER college courses**
a. Interdisciplinary science (a single course that addresses content across ***multiple*** science subjects, such as biology, chemistry, physics and/or Earth science)		
b. Biology/Life science		
c. Chemistry		
d. Physics		
e. Earth/Space science		
f. Environmental science		
g. Engineering		
h. Mathematics		

27. How many of the undergraduate and graduate level science courses you completed were taken at each of the following types of institutions? (Please do not include science education courses.) [Enter each response as a whole number (for example: 15).]

a. Two-year college, community college, and/or technical school _____
b. Four-year college and/or university _____

28. Which of the following best describes your teacher certification program?

○	An undergraduate program leading to a bachelor's degree and a teaching credential
○	A post-baccalaureate credentialing program (no master's degree awarded)
○	A master's program that also awarded a teaching credential
○	You did not have any formal teacher preparation

29. When did you **last participate** in professional development (sometimes called in-service education) focused on science or science teaching? (Include attendance at professional meetings, workshops, and conferences, as well as professional learning communities/lesson studies/teacher study groups. **Do not** include formal courses for which you received college credit or time you spent **providing** professional development for other teachers.)

○	In the last 3 years
○	4–6 years ago
○	7–10 years ago
○	More than 10 years ago
○	Never

} ***Skip to 33***

30. In the last 3 years have you… [Select one on each row.]

		Yes	No
a.	attended a workshop on science or science teaching?	○	○
b.	attended a national, state, or regional science teacher association meeting?	○	○
c.	participated in a professional learning community/lesson study/teacher study group focused on science or science teaching?	○	○

31. What is the **total** amount of time you have spent on professional development in science or science teaching **in the last 3 years**? (Include attendance at professional meetings, workshops, and conferences, as well as professional learning communities/lesson studies/teacher study groups. **Do not** include formal courses for which you received college credit or time you spent **providing** professional development for other teachers.)

○	Less than 6 hours
○	6-15 hours
○	16-35 hours
○	More than 35 hours

32. Thinking about all of your science-related professional development **in the last 3 years**, to what extent does each of the following describe your experiences? [Select one on each row.]

	Not at all		Somewhat		To a great extent
a. You had opportunities to engage in science investigations.	①	②	③	④	⑤
b. You had opportunities to examine classroom artifacts (for example: student work samples).	①	②	③	④	⑤
c. You had opportunities to try out what you learned in your classroom ***and*** then talk about it as part of the professional development.	①	②	③	④	⑤
d. You worked closely with other science teachers from your school.	①	②	③	④	⑤
e. You worked closely with other science teachers who taught the same grade and/or subject whether or not they were from your school.	①	②	③	④	⑤
f. The professional development was a waste of your time.	①	②	③	④	⑤

33. When did you last take a formal course for **college credit** in each of the following areas? Do not count courses for which you received only Continuing Education Units. [Select one on each row.]

	In the last 3 years	4 – 6 years ago	7 – 10 years ago	More than 10 years ago	Never
a. Science	○	○	○	○	○
b. How to teach science	○	○	○	○	○
c. Student teaching in science	○	○	○	○	○
d. Student teaching in other subjects	○	○	○	○	○

34. ***[Presented only to teachers that have participated in professional development in the last three years as indicated in Q29, OR took a course in "Science" or "How to teach science" in the last three years as indicated in q33a/b]***

Considering all the opportunities to learn about science or the teaching of science (professional development and coursework) **in the last 3 years**, how much was each of the following emphasized? [Select one on each row.]

	Not at all		Somewhat		To a great extent
a. Deepening your own science content knowledge	①	②	③	④	⑤
b. Learning about difficulties that students may have with particular science ideas and procedures	①	②	③	④	⑤
c. Finding out what students think or already know about the key science ideas prior to instruction on those ideas	①	②	③	④	⑤
d. Implementing the science textbook/module to be used in your classroom	①	②	③	④	⑤
e. Planning instruction so students at different levels of achievement can increase their understanding of the ideas targeted in each activity	①	②	③	④	⑤
f. Monitoring student understanding during science instruction	①	②	③	④	⑤
g. Providing enrichment experiences for gifted students	①	②	③	④	⑤
h. Providing alternative science learning experiences for students with special needs	①	②	③	④	⑤
i. Teaching science to English-language learners	①	②	③	④	⑤
j. Assessing student understanding at the conclusion of instruction on a topic	①	②	③	④	⑤

35. In the last 3 years have you… [Select one on each row.]

	Yes	No
a. received feedback about your science teaching from a mentor/coach **formally assigned** by the school or district/diocese?	○	○
b. served as a **formally-assigned** mentor/coach for science teaching? (Please do not include supervision of student teachers.)	○	○
c. supervised a student teacher in your classroom?	○	○
d. taught in-service workshops on science or science teaching?	○	○
e. led a professional learning community/lesson study/teacher study group focused on science or science teaching?	○	○

36. ***[Presented only to grades K–5 teachers; sub-items e, f, and g for self-contained teachers only]***
Many teachers feel better prepared to teach some subject areas than others. How well prepared do you feel to teach each of the following subjects **at the grade level(s) you teach**, whether or not they are currently included in your teaching responsibilities? [Select one on each row.]

	Not adequately prepared	Somewhat prepared	Fairly well prepared	Very well prepared
a. Life Science	①	②	③	④
b. Earth Science	①	②	③	④
c. Physical Science	①	②	③	④
d. Engineering	①	②	③	④
e. Mathematics	①	②	③	④
f. Reading/Language Arts	①	②	③	④
g. Social Studies	①	②	③	④

37. ***[Presented only to grades 6–12 teachers; non-self-contained teachers shown only topics related to their randomly selected class and engineering; self-contained teachers shown all topics]***

Within science many teachers feel better prepared to teach some topics than others. How well prepared do you feel to teach each of the following topics **at the grade level(s) you teach**, whether or not they are currently included in your teaching responsibilities? [Select one on each row.]

	Not adequately prepared	Somewhat prepared	Fairly well prepared	Very well prepared
a. Earth/Space Science				
i. Earth's features and physical processes	①	②	③	④
ii. The solar system and the universe	①	②	③	④
iii. Climate and weather	①	②	③	④
b. Biology/Life Science				
i. Cell biology	①	②	③	④
ii. Structures and functions of organisms	①	②	③	④
iii. Ecology/ecosystems	①	②	③	④
iv. Genetics	①	②	③	④
v. Evolution	①	②	③	④
c. Chemistry				
i. Atomic structure	①	②	③	④
ii. Chemical bonding, equations, nomenclature, and reactions	①	②	③	④
iii. Elements, compounds, and mixtures	①	②	③	④
iv. The Periodic Table	①	②	③	④
v. Properties of solutions	①	②	③	④
vi. States, classes, and properties of matter	①	②	③	④
d. Physics				
i. Forces and motion	①	②	③	④
ii. Energy transfers, transformations, and conservation	①	②	③	④
iii. Properties and behaviors of waves	①	②	③	④
iv. Electricity and magnetism	①	②	③	④
v. Modern physics (for example: special relativity)	①	②	③	④
e. Engineering (for example: nature of engineering and technology, design processes, analyzing and improving technological systems, interactions between technology and society)	①	②	③	④
f. Environmental and resource issues (for example: land and water use, energy resources and consumption, sources and impacts of pollution)	①	②	③	④

38. How well prepared do you feel to do each of the following in your science instruction? [Select one on each row.]

	Not adequately prepared	Somewhat prepared	Fairly well prepared	Very well prepared
a. Plan instruction so students at different levels of achievement can increase their understanding of the ideas targeted in each activity	①	②	③	④
b. Teach science to students who have learning disabilities	①	②	③	④
c. Teach science to students who have physical disabilities	①	②	③	④
d. Teach science to English-language learners	①	②	③	④
e. Provide enrichment experiences for gifted students	①	②	③	④
f. Encourage students' interest in science and/or engineering	①	②	③	④
g. Encourage participation of females in science and/or engineering	①	②	③	④
h. Encourage participation of racial or ethnic minorities in science and/or engineering	①	②	③	④
i. Encourage participation of students from low socioeconomic backgrounds in science and/or engineering	①	②	③	④
j. Manage classroom discipline	①	②	③	④

39. Please provide your opinion about each of the following statements. [Select one on each row.]

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
a. Students learn science best in classes with students of similar abilities.	①	②	③	④	⑤
b. Inadequacies in students' science background can be overcome by effective teaching.	①	②	③	④	⑤
c. It is better for science instruction to focus on ideas in depth, even if that means covering fewer topics.	①	②	③	④	⑤
d. Students should be provided with the purpose for a lesson as it begins.	①	②	③	④	⑤
e. At the beginning of instruction on a science idea, students should be provided with definitions for new scientific vocabulary that will be used.	①	②	③	④	⑤
f. Teachers should explain an idea to students before having them consider evidence that relates to the idea.	①	②	③	④	⑤
g. Most class periods should include some review of previously covered ideas and skills.	①	②	③	④	⑤
h. Most class periods should provide opportunities for students to share their thinking and reasoning.	①	②	③	④	⑤
i. Hands-on/laboratory activities should be used primarily to reinforce a science idea that the students have already learned.	①	②	③	④	⑤
j. Students should be assigned homework most days.	①	②	③	④	⑤
k. Most class periods should conclude with a summary of the key ideas addressed.	①	②	③	④	⑤

Section B. Your Science Instruction

The rest of this questionnaire is about your science instruction in this class.

40. ***[Presented to non-self-contained teachers only]***
On average, how many minutes per week does this class meet? [Enter your response as a whole number (for example: 300).] _____

41. Enter the number of students for each grade represented in this class. [Enter each response as a whole number (for example: 15).]

Kindergarten	
1st grade	
2nd grade	
3rd grade	
4th grade	
5th grade	
6th grade	
7th grade	
8th grade	
9th grade	
10th grade	
11th grade	
12th grade	

42. For the students in this class, indicate the number of males and females in this class in each of the following categories of race/ethnicity. [Enter each response as a whole number (for example: 15).]

	Males	**Females**
a. American Indian or Alaska Native		
b. Asian		
c. Black or African American		
d. Hispanic/Latino		
e. Native Hawaiian or Other Pacific Islander		
f. White		
g. Two or more races		

43. Which of the following best describes the prior science achievement levels of the students in this class relative to other students in this school?

○	Mostly low achievers
○	Mostly average achievers
○	Mostly high achievers
○	A mixture of levels

44. How much control do you have over each of the following aspects of science instruction in this class? [Select one on each row.]

	No Control		Moderate Control		Strong Control
a. Determining course goals and objectives	①	②	③	④	⑤
b. Selecting textbooks/modules	①	②	③	④	⑤
c. Selecting content, topics, and skills to be taught	①	②	③	④	⑤
d. Selecting teaching techniques	①	②	③	④	⑤
e. Determining the amount of homework to be assigned	①	②	③	④	⑤
f. Choosing criteria for grading student performance	①	②	③	④	⑤

45. Think about your plans for this class for the entire course/year. By the end of the course/year, how much emphasis will each of the following student objectives receive? [Select one on each row.]

	None	Minimal emphasis	Moderate emphasis	Heavy emphasis
a. Memorizing science vocabulary and/or facts	①	②	③	④
b. Understanding science concepts	①	②	③	④
c. Learning science process skills (for example: observing, measuring)	①	②	③	④
d. Learning about real-life applications of science	①	②	③	④
e. Increasing students' interest in science	①	②	③	④
f. Preparing for further study in science	①	②	③	④
g. Learning test taking skills/strategies	①	②	③	④

46. How often do you do each of the following in your science instruction in this class? [Select one on each row.]

	Never	Rarely (for example: A few times a year)	Sometimes (for example: Once or twice a month)	Often (for example: Once or twice a week)	All or almost all science lessons
a. Explain science ideas to the whole class	①	②	③	④	⑤
b. Engage the whole class in discussions	①	②	③	④	⑤
c. Have students work in small groups	①	②	③	④	⑤
d. Do hands-on/laboratory activities	①	②	③	④	⑤
e. Engage the class in project-based learning (PBL) activities	①	②	③	④	⑤
f. Have students read from a science textbook, module, or other science-related material in class, either aloud or to themselves	①	②	③	④	⑤
g. Have students represent and/or analyze data using tables, charts, or graphs	①	②	③	④	⑤
h. Require students to supply evidence in support of their claims	①	②	③	④	⑤
i. Have students make formal presentations to the rest of the class (for example: on individual or group projects)	①	②	③	④	⑤
j. Have students write their reflections (for example: in their journals) in class or for homework	①	②	③	④	⑤
k. Give tests and/or quizzes that are predominantly short-answer (for example: multiple choice, true /false, fill in the blank)	①	②	③	④	⑤
l. Give tests and/or quizzes that include constructed-response/open-ended items	①	②	③	④	⑤
m. Focus on literacy skills (for example: informational reading or writing strategies)	①	②	③	④	⑤
n. Have students practice for standardized tests	①	②	③	④	⑤
o. Have students attend presentations by guest speakers focused on science and/or engineering in the workplace	①	②	③	④	⑤

47. Which best describes the availability of each of the following for small group (4-5 students) work in this class? [Select one on each row.]

	Do not have one per group available	At least one per group available upon request or in another room	At least one per group located in your classroom
a. Personal computers, including laptops	○	○	○
b. Hand-held computers (for example: PDAs, tablets, smartphones, iPads)	○	○	○
c. Internet access	○	○	○
d. Graphing calculators	○	○	○
e. Other calculators	○	○	○
f. Probes for collecting data (for example: motion sensors, temperature probes)	○	○	○
g. Microscopes	○	○	○
h. Classroom response system or "Clickers" (handheld devices used to respond electronically to questions in class)	○	○	○

48. For each of the following, are students expected to provide their own for use in this science class? [Select one on each row.]

	Yes	No
a. Laptop computers	○	○
b. Hand-held computers	○	○
c. Graphing calculators	○	○
d. Other calculators	○	○

49. How often do students use each of the following instructional technologies in this science class? [Select one on each row.]

	Never	Rarely (for example: A few times a year)	Sometimes (for example: Once or twice a month)	Often (for example: Once or twice a week)	All or almost all science lessons
a. Personal computers, including laptops	①	②	③	④	⑤
b. Hand-held computers	①	②	③	④	⑤
c. Internet	①	②	③	④	⑤
d. Calculators ***[Presented to grades K–5 teachers only]***	①	②	③	④	⑤
e. Graphing calculators ***[Presented to grades 6–12 teachers only]***	①	②	③	④	⑤
f. Probes for collecting data	①	②	③	④	⑤
g. Classroom response system or "Clickers"	①	②	③	④	⑤

50. Please indicate the availability of each of the following for your science instruction in this class. [Select one on each row.]

	Not available	Available in another room	Located in your classroom
a. Lab tables	○	○	○
b. Electric outlets	○	○	○
c. Faucets and sinks	○	○	○
d. Gas for burners ***[Presented to grades 9–12 teachers only]***	○	○	○
e. Fume hoods ***[Presented to grades 9–12 teachers only]***	○	○	○

51. How often are students in this class required to take science tests that you did not develop yourself, for example state assessments or district benchmarks? (Do not include Advanced Placement or International Baccalaureate exams or students retaking a test because of failure.)

○	Never
○	Once a year
○	Twice a year
○	Three or four times a year
○	Five or more times a year

52. How much science homework do you assign to this class in a typical **week**? (Do not include time that the class spends getting started on homework during class.)

○	Fewer than 15 minutes per week
○	15-30 minutes per week
○	31-60 minutes per week
○	61-90 minutes per week
○	91-120 minutes per week
○	2 to 3 hours per week
○	3-4 hours per week
○	More than 4 hours per week

53. Which best describes the instructional materials students **most frequently** use in this class?

Mainly commercially-published textbook(s)	
○	One textbook
○	Multiple textbooks
Mainly commercially-published modules	
○	Modules from a single publisher
○	Modules from multiple publishers
Other	
○	A roughly equal mix of commercially-published textbooks and commercially-published modules most of the time
○	Non-commercially-published materials most of the time ***[Skip to Q58]***

54. Please indicate the title, author, most recent copyright year, and ISBN code of the textbook/module used by the students in this class.

- The 10- or 13-character ISBN code can be found on the copyright page and/or the back cover of the textbook/module.
- Do not include the dashes when entering the ISBN.
- An example of the location of the ISBN is shown to the right.

Title:
First Author:
Year:
ISBN:

55. How would you rate the overall quality of this textbook/the modules used from this publisher?

○	Very poor
○	Poor
○	Fair
○	Good
○	Very good
○	Excellent

56. ***[Presented only to teachers who indicated using one commercially-published textbook or modules from a single publisher in Q53]***
Over the course of the school year, approximately what percentage of the science **instructional time** will students in this class spend using this textbook/these modules?

○	Less than 25%
○	25-49%
○	50-74%
○	75-90%
○	More than 90%

57. ***[Presented only to teachers who indicated using one commercially-published textbook in Q53]***
Approximately what percentage of the chapters in this textbook will students in this class engage with during the school year?

○	Less than 25%
○	25-49%
○	50-74%
○	75-90%
○	More than 90%

58. Science courses may benefit from the availability of particular kinds of ***equipment*** (for example: microscopes, beakers, photogate timers, Bunsen burners). How adequate is the ***equipment*** you have available for teaching this science class?

○	Not adequate
○	
○	Somewhat adequate
○	
○	Adequate

59. Science courses may benefit from the availability of particular kinds of ***instructional technology*** (for example: calculators, computers, probes/sensors). How adequate is the ***instructional technology*** you have available for teaching this science class?

○	Not adequate
○	
○	Somewhat adequate
○	
○	Adequate

60. Science courses may benefit from the availability of particular kinds of ***consumable supplies*** (for example: chemicals, living organisms, batteries). How adequate are the ***consumable supplies*** you have available for teaching this science class?

○	Not adequate
○	
○	Somewhat adequate
○	
○	Adequate

61. Science courses may benefit from the availability of particular kinds of ***facilities*** (for example: lab tables, electric outlets, faucets and sinks). How adequate are the ***facilities*** you have available for teaching this science class?

○	Not adequate
○	
○	Somewhat adequate
○	
○	Adequate

62. In your opinion, how great a problem is each of the following for your science instruction in this class? [Select one on each row.]

	Not a significant problem	**Somewhat of a problem**	**Serious problem**
a. Lack of access to computers	○	○	○
b. Old age of computers	○	○	○
c. Lack of access to the Internet	○	○	○
d. Unreliability of the Internet connection	○	○	○
e. Slow speed of the Internet connection	○	○	○
f. Lack of availability of appropriate computer software	○	○	○
g. Lack of availability of technology support	○	○	○

63. Please rate the effect of each of the following on your science instruction in this class. [Select one on each row.]

	Inhibits effective instruction		**Neutral or Mixed**		**Promotes effective instruction**	**N/A or Don't Know**
a. Current state standards	①	②	③	④	⑤	○
b. District/Diocese curriculum frameworks ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤	○
c. District/Diocese and/or school pacing guides	①	②	③	④	⑤	○
d. State testing/accountability policies ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤	○
e. District/Diocese testing/accountability policies ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤	○
f. Textbook/module selection policies	①	②	③	④	⑤	○
g. Teacher evaluation policies	①	②	③	④	⑤	○
h. College entrance requirements ***[Presented to grades 9–12 teachers only]***	①	②	③	④	⑤	○
i. Students' motivation, interest, and effort in science	①	②	③	④	⑤	○
j. Students' reading abilities	①	②	③	④	⑤	○
k. Community views on science instruction	①	②	③	④	⑤	○
l. Parent expectations and involvement	①	②	③	④	⑤	○
m. Principal support	①	②	③	④	⑤	○
n. Time for you to plan, individually and with colleagues	①	②	③	④	⑤	○
o. Time available for your professional development	①	②	③	④	⑤	○

Section C. Your Most Recently Completed Science Unit in this Class

The questions in this section are about the most recently completed science unit in this class.

- Depending on the structure of your class and the instructional materials you use, a unit may range from a few to many class periods.
- Do not be concerned if this unit was not typical of your instruction.

64. How many class periods were devoted to instruction on the **most recently completed science unit**? [Enter your response as a whole number (for example: 15).] _____

65. Which of the following best describes the content of this unit?

○	Earth/Space Science
○	Life Science/Biology
○	Environmental Science/Ecology
○	Chemistry
○	Physics
○	Engineering

66. What science ideas and/or skills were addressed in this unit? _____

67. ***[Presented only to teachers who indicated using commercially-published textbooks/modules in Q53]***

Was this unit based primarily on the commercially-published textbook/modules you described earlier as the one used most often in this class?

○	Yes ***[Skip to Q70]***
○	No

68. Was this unit based on a commercially-published textbook/module?

○	Yes
○	No ***[Skip to Q74]***

69. Please indicate the title, author, most recent copyright year, and ISBN code of that textbook/module.

- The 10- or 13-character ISBN code can be found on the copyright page and/or the back cover of the textbook/module.
- Do not include the dashes when entering the ISBN.
- An example of the location of the ISBN is shown to the right.

Title:
First Author:
Year:
ISBN:

70. Please indicate the extent to which you did each of the following while teaching this unit. [Select one on each row.]

	Not at all		Somewhat		To a great extent
a. You used the textbook/module to guide the overall structure and content emphasis of the unit.	①	②	③	④	⑤
b. You followed the textbook/module to guide the detailed structure and content emphasis of the unit.	①	②	③	④	⑤
c. You picked what is important from the textbook/module and skipped the rest.	①	②	③	④	⑤
d. You incorporated activities (for example: problems, investigations, readings) from other sources to supplement what the textbook/module was lacking.	①	②	③	④	⑤

71. ***[Presented only to teachers who answered "2–5" in Q70c]***

During this unit, when you skipped activities (for example: problems, investigations, readings) in your textbook/module, how much was each of the following a factor in your decisions? [Select one on each row.]

	Not a factor	A minor factor	A major factor
a. The science ideas addressed in the activities you skipped are not included in your pacing guide and/or current state standards.	①	②	③
b. You did not have the materials needed to implement the activities you skipped.	①	②	③
c. The activities you skipped were too difficult for your students.	①	②	③
d. Your students already knew the science ideas or were able to learn them without the activities you skipped.	①	②	③
e. You have different activities for those science ideas that work better than the ones you skipped.	①	②	③

72. ***[Presented only to teachers who answered "2–5" in Q70d]***

During this unit, when you supplemented the textbook/module with additional activities, how much was each of the following a factor in your decisions? [Select one on each row.]

	Not a factor	A minor factor	A major factor
a. Your pacing guide indicated that you should use supplemental activities.	①	②	③
b. Supplemental activities were needed to prepare students for standardized tests.	①	②	③
c. Supplemental activities were needed to provide students with additional practice.	①	②	③
d. Supplemental activities were needed so students at different levels of achievement could increase their understanding of the ideas targeted in each activity.	①	②	③

73. How well prepared did you feel to do each of the following as part of your instruction on this particular unit? [Select one on each row.]

	Not adequately prepared	Somewhat prepared	Fairly well prepared	Very well prepared
a. Anticipate difficulties that students may have with particular science ideas and procedures in this unit	①	②	③	④
b. Find out what students thought or already knew about the key science ideas	①	②	③	④
c. Implement the science textbook/module to be used during this unit ***[Presented only to teachers who indicated using commercially-published textbooks/modules in Q67/68]***	①	②	③	④
d. Monitor student understanding during this unit	①	②	③	④
e. Assess student understanding at the conclusion of this unit	①	②	③	④

74. Which of the following did you do during this unit? [Select all that apply.]

□	Administered an assessment, task, or probe at the beginning of the unit to find out what students thought or already knew about the key science ideas
□	Questioned individual students during class activities to see if they were "getting it"
□	Used information from informal assessments of the entire class (for example: asking for a show of hands, thumbs up/thumbs down, clickers, exit tickets) to see if students were "getting it"
□	Reviewed student work (for example: homework, notebooks, journals, portfolios, projects) to see if they were "getting it"
□	Administered one or more quizzes and/or tests to see if students were "getting it"
□	Had students use rubrics to examine their own or their classmates' work
□	Assigned grades to student work (for example: homework, notebooks, journals, portfolios, projects)
□	Administered one or more quizzes and/or tests to assign grades
□	Went over the correct answers to assignments, quizzes, and/or tests with the class as a whole

Section D. Your Most Recent Science Lesson in this Class

The next three questions refer to the most recent science lesson in this class, whether or not that instruction was part of the unit you've just been describing. Do not be concerned if this lesson included activities and/or interruptions that are not typical (for example: a test, students working on projects, a fire drill).

75. How many minutes was that lesson? [Enter your response as a non-zero whole number (for example: 50).] _____

76. Of these minutes, how many were spent on the following: [Enter each response as a whole number (for example: 15).]

a. Non-instructional activities (for example: attendance taking, interruptions) ____
b. Whole class activities (for example: lectures, explanations, discussions)____
c. Small group work ___
d. Students working individually (for example: reading textbooks, completing worksheets, taking a test or quiz) ___

77. Which of the following activities took place during that science lesson? [Select all that apply.]

□	Teacher explaining a science idea to the whole class
□	Whole class discussion
□	Students completing textbook/worksheet problems
□	Teacher conducting a demonstration while students watched
□	Students doing hands-on/laboratory activities
□	Students reading about science
□	Students using instructional technology
□	Practicing for standardized tests
□	Test or quiz
□	None of the above

Section E. Demographic Information

78. Indicate your sex:

○	Male
○	Female

79. Are you of Hispanic or Latino origin?

○	Yes
○	No

80. What is your race? [Select all that apply.]

□	American Indian or Alaska Native
□	Asian
□	Black or African American
□	Native Hawaiian or Other Pacific Islander
□	White

81. In what year were you born? [Enter your response as a whole number (for example: 1969). Do not use commas.] _____

Thank you!

2012 NATIONAL SURVEY OF SCIENCE AND MATHEMATICS EDUCATION
MATHEMATICS TEACHER QUESTIONNAIRE

Section A. Teacher Background and Opinions

1. How many years have you taught prior to this school year: [Enter each response as a whole number (for example: 15).]

a. any subject at the K-12 level? _____
b. mathematics at the K-12 level? _____
c. at this school, any subject? _____

2. At what grade levels do you currently teach mathematics? [Select all that apply.]

□	K-5
□	6-8
□	9-12
□	You do not currently teach mathematics

3. ***[Presented to self-contained teachers only]***

Which best describes the mathematics instruction provided to the entire class?

- Do not consider pull-out instruction that some students may receive for remediation or enrichment.
- Do not consider instruction provided to individual or small groups of students, for example by an English-language specialist, special educator, or teacher assistant.

○	This class receives mathematics instruction ***only*** from you. ***[Presented only to teachers who answered in Q2 that they teach mathematics]***
○	This class receives mathematics instruction from you and another teacher (for example: a mathematics specialist or a teacher you team with). ***[Presented only to teachers who answered in Q2 that they teach mathematics]***

4. ***[Presented to self-contained teachers only]***

Which best describes your mathematics teaching?

○	I teach mathematics all or most days, every week of the year.
○	I teach mathematics every week, but typically three or fewer days each week.
○	I teach mathematics some weeks, but typically not every week.

5. ***[Presented to self-contained teachers only]***

Which best describes your science teaching?

○	I teach science all or most days, every week of the year.
○	I teach science every week, but typically three or fewer days each week.
○	I teach science some weeks, but typically not every week. ***[Skip to Q7]***
○	I do not teach science.

6. ***[Presented to self-contained teachers only]***

In a typical week, how many days do you teach lessons on each of the following subjects and how many minutes per week are spent on each subject? [Enter each response as a whole number (for example: 5, 150).]

	Number of days per week	Total number of minutes per week
a. Mathematics		
b. Science		
c. Social Studies		
d. Reading/Language Arts		

[SKIP to Q8]

7. ***[Presented to self-contained teachers only]*** In a typical year, how many weeks do you teach lessons on each of the following subjects and how many minutes per week are spent on each subject? [Enter each response as a whole number (for example: 36, 150).]

	Number of weeks per year	Average number of minutes per week when taught
a. Mathematics		
b. Science		
c. Social Studies		
d. Reading/Language Arts		

8. ***[Presented to non-self-contained teachers only]***

I***n a typical week***, how many different mathematics classes do you teach?

- If you meet with the *same class of students* multiple times per week, count that class only once.
- If you teach the *same mathematics course* to multiple classes of students, count each class separately.

1	2	3	4	5	6	7	8	9	10
○	○	○	○	○	○	○	○	○	○

9. ***[Presented to non-self-contained teachers only]***

For each mathematics class you teach, select the course type and enter the number of students enrolled in the class.

Grades 9-12 Course Type	Example Courses
Non-college prep mathematics courses	Developmental Math; High School Arithmetic; Remedial Math; General Math; Vocational Math; Consumer Math; Basic Math; Business Math; Career Math; Practical Math; Essential Math; Pre-Algebra; Introductory Algebra; Algebra 1 Part 1; Algebra 1A; Math A; Basic Geometry; Informal Geometry; Practical Geometry
Formal/College-prep Mathematics Level 1 courses	Algebra 1; Integrated Math 1; Unified Math I; Algebra 1 Part 2; Algebra 1B; Math B
Formal/College-prep Mathematics Level 2 courses	Geometry; Plane Geometry; Solid Geometry; Integrated Math 2; Unified Math II; Math C
Formal/College-prep Mathematics Level 3 courses	Algebra 2; Intermediate Algebra; Algebra and Trigonometry; Advanced Algebra; Integrated Math 3; Unified Math III
Formal/College-prep Mathematics Level 4 courses	Algebra 3; Trigonometry; Pre-Calculus; Analytic/Advanced Geometry; Elementary Functions; Integrated Math 4; Unified Math IV; Calculus (not including college level/AP); any other College Prep Senior Math with Algebra 2 as a prerequisite
Mathematics courses that might qualify for college	Advanced Placement Calculus (AB, BC); Advanced Placement Statistics; IB Mathematics standard level; IB Mathematics higher level; concurrent college and high school credit/dual

credit	enrollment

Class	Course Type	Number of Students
Your 1st mathematics class:		
Your 2nd mathematics class:		
…		
Your Nth mathematics class:		

Course Type List	
1	Mathematics (Grades K - 5)
2	Remedial Mathematics 6
3	Regular Mathematics 6
4	Accelerated/Pre-Algebra Mathematics 6
5	Remedial Mathematics 7
6	Regular Mathematics 7
7	Accelerated Mathematics 7
8	Remedial Mathematics 8
9	Regular Mathematics 8
10	Accelerated Mathematics 8
11	Algebra 1, Grade 7 or 8
12	Non-college prep mathematics course (Grades 9 - 12)
13	Formal/College-prep Mathematics Level 1 course (Grades 9 - 12)
14	Formal/College-prep Mathematics Level 2 course (Grades 9 - 12)
15	Formal/College-prep Mathematics Level 3 course (Grades 9 - 12)
16	Formal/College-prep Mathematics Level 4 course (Grades 9 - 12)
17	Mathematics course that might qualify for college credit (Grades 9 - 12)

10. ***[Presented to non-self-contained teachers only]***
Later in this questionnaire, we will ask you questions about your randomly selected mathematics class, which you indicated was [*course type teacher selected in Q9*]. What is your school's title for this course? _____

11. Have you been awarded one or more bachelor's and/or graduate degrees in the following fields? (With regard to bachelor's degrees, count only areas in which you majored.) [Select one on each row.]

	Yes	No
a. Education, including mathematics education	○	○
b. Mathematics	○	○
c. Computer Science	○	○
d. Engineering	○	○
e. Other, please specify._____	○	○

12. ***[Presented only to teachers that answered "Yes" to Q11a]***

What type of education degree do you have? (With regard to bachelor's degrees, count only areas in which you majored.) [Select all that apply.]

□	Elementary Education
□	Mathematics Education
□	Science Education
□	Other Education, please specify. _____

13. For each of the following areas, indicate the number of semester and/or quarter mathematics courses you completed.

- Count *courses* **not** credit hours.
- Include courses taken at the graduate or undergraduate level, as well as courses for which you received college credit while you were in high school.
- Count each course taken in high school for college credit as a one semester college course.
- Count courses that lasted multiple semesters or quarters as multiple courses.
- If your transcripts are not available, provide your best estimates.
- Enter your responses as whole numbers (for example: 3). You may either enter 0 (zero) or leave the box empty wherever applicable.

	Number of SEMESTER college courses	**Number of QUARTER college courses**
a. Mathematics content for elementary school teachers		
b. Mathematics content for middle school teachers		
c. Mathematics content for high school teachers		
d. Integrated mathematics (a single course that addresses content across ***multiple*** mathematics subjects, such as algebra and geometry)		
e. College algebra/trigonometry/functions		
f. Abstract algebra (for example: groups, rings, ideals, fields) ***[Presented to grades 6–12 teachers only]***		
g. Linear algebra (for example: vectors, matrices, eigenvalues) ***[Presented to grades 6–12 teachers only]***		
h. Calculus		
i. Advanced calculus ***[Presented to grades 6–12 teachers only]***		
j. Real analysis ***[Presented to grades 6–12 teachers only]***		
k. Differential equations ***[Presented to grades 6–12 teachers only]***		
l. Analytic/Coordinate Geometry (for example: transformations or isometries, conic sections) ***[Presented to grades 6–12 teachers only]***		
m. Axiomatic Geometry (Euclidean or non-Euclidean) ***[Presented to grades 6–12 teachers only]***		
n. College geometry ***[Presented to grades K–5 teachers only]***		
o. Probability		
p. Statistics		
q. Number theory (for example: divisibility theorems, properties of prime numbers) ***[Presented to grades 6–12 teachers only]***		
r. Discrete mathematics (for example: combinatorics, graph theory, game theory)		
s. Other upper division mathematics		

14. For each of the following areas, indicate the number of semester and/or quarter courses you completed.

- Count *courses* **not** credit hours.
- Include courses taken at the graduate or undergraduate level, as well as courses for which you received college credit while you were in high school.
- Count each course taken in high school for college credit as a one semester college course.
- Count courses that lasted multiple semesters or quarters as multiple courses.
- If your transcripts are not available, provide your best estimates.
- Enter your responses as whole numbers (for example: 3). You may either enter 0 (zero) or leave the box empty wherever applicable.

	Number of SEMESTER college courses	Number of QUARTER college courses
a. Computer science		
b. Engineering		
c. Science		

15. How many of the undergraduate and graduate level mathematics courses you completed were taken at each of the following types of institutions? (Please do not include mathematics education courses.) [Enter each response as a whole number (for example: 15).]

a. Two-year college, community college, and/or technical school _____
b. Four-year college and/or university _____

16. Which of the following best describes your teacher certification program?

○	An undergraduate program leading to a bachelor's degree and a teaching credential
○	A post-baccalaureate credentialing program (no master's degree awarded)
○	A master's program that also awarded a teaching credential
○	You do not have any formal teacher preparation

17. When did you **last participate** in professional development (sometimes called in-service education) focused on mathematics or mathematics teaching? (Include attendance at professional meetings, workshops, and conferences, as well as professional learning communities/lesson studies/teacher study groups. **Do not** include formal courses for which you received college credit or time spent **providing** professional development for other teachers.)

○	In the last 3 years
○	4–6 years ago
○	7–10 years ago
○	More than 10 years ago
○	Never

} ***Skip to Q21***

18. In the last 3 years have you… [Select one on each row.]

	Yes	No
a. attended a workshop on mathematics or mathematics teaching?	○	○
b. attended a national, state, or regional mathematics teacher association meeting?	○	○
c. participated in a professional learning community/lesson study/teacher study group focused on mathematics or mathematics teaching?	○	○

19. What is the **total** amount of time you have spent on professional development in mathematics or mathematics teaching **in the last 3 years**? (Include attendance at professional meetings, workshops, and conferences, as well as professional learning communities/lesson studies/teacher study groups. **Do not** include formal courses for which you received college credit or time spent **providing** professional development for other teachers.)

○	Less than 6 hours
○	6-15 hours
○	16-35 hours
○	More than 35 hours

20. Thinking about all of your mathematics-related professional development **in the last 3 years**, to what extent does each of the following describe your experiences? [Select one on each row.]

	Not at all		**Somewhat**		**To a great extent**
a. You had opportunities to engage in mathematics investigations.	①	②	③	④	⑤
b. You had opportunities to examine classroom artifacts (for example: student work samples).	①	②	③	④	⑤
c. You had opportunities to try out what you learned in your classroom ***and*** then talk about it as part of the professional development.	①	②	③	④	⑤
d. You worked closely with other mathematics teachers from your school.	①	②	③	④	⑤
e. You worked closely with other mathematics teachers who taught the same grade and/or subject whether or not they were from your school.	①	②	③	④	⑤
f. The professional development was a waste of your time.	①	②	③	④	⑤

21. When did you last take a formal course for **college credit** in each of the following areas? Do not count courses for which you received only Continuing Education Units. [Select one on each row.]

	In the last 3 years	**4 – 6 years ago**	**7 – 10 years ago**	**More than 10 years ago**	**Never**
a. Mathematics	○	○	○	○	○
b. How to teach mathematics	○	○	○	○	○
c. Student teaching in mathematics	○	○	○	○	○
d. Student teaching in other subjects	○	○	○	○	○

22. ***[Presented only to teachers that have participated in professional development in the last three years as indicated in Q17, OR took a course in "Mathematics" or "How to teach mathematics" in the last three years as indicated in q21a/b]***

Considering all the opportunities to learn about mathematics or the teaching of mathematics (professional development and coursework) **in the last 3 years**, how much was each of the following emphasized? [Select one on each row.]

	Not at all		**Somewhat**		**To a great extent**
a. Deepening your own mathematics content knowledge	①	②	③	④	⑤
b. Learning how to use hands-on activities/manipulatives for mathematics instruction	①	②	③	④	⑤
c. Learning about difficulties that students may have with particular mathematical ideas and procedures	①	②	③	④	⑤
d. Finding out what students think or already know about the key mathematical ideas prior to instruction on those ideas	①	②	③	④	⑤
e. Implementing the mathematics textbook/program to be used in your classroom	①	②	③	④	⑤
f. Planning instruction so students at different levels of achievement can increase their understanding of the ideas targeted in each activity	①	②	③	④	⑤
g. Monitoring student understanding during mathematics instruction	①	②	③	④	⑤
h. Providing enrichment experiences for gifted students	①	②	③	④	⑤
i. Providing alternative mathematics learning experiences for students with special needs	①	②	③	④	⑤
j. Teaching mathematics to English-language learners	①	②	③	④	⑤
k. Assessing student understanding at the conclusion of instruction on a topic	①	②	③	④	⑤

23. In the last 3 years have you… [Select one on each row.]

	Yes	**No**
a. received feedback about your mathematics teaching from a mentor/coach **formally assigned** by the school or district/diocese?	○	○
b. served as a **formally assigned** mentor/coach for mathematics teaching? (Please do not include supervision of student teachers.)	○	○
c. supervised a student teacher in your classroom?	○	○
d. taught in-service workshops on mathematics or mathematics teaching ?	○	○
e. led a professional learning community/lesson study/teacher study group focused on mathematics or mathematics teaching?	○	○

24. ***[Presented to self-contained teachers only]***

Many teachers feel better prepared to teach some subjects/topics than others. How well prepared do you feel to teach each of the following **at the grade level(s) you teach**, whether or not they are currently included in your teaching responsibilities? [Select one on each row.]

	Not adequately prepared	Somewhat prepared	Fairly well prepared	Very well prepared
a. Number and Operations	①	②	③	④
b. Early Algebra	①	②	③	④
c. Geometry	①	②	③	④
d. Measurement and Data Representation	①	②	③	④
e. Science	①	②	③	④
f. Reading/Language Arts	①	②	③	④
g. Social Studies	①	②	③	④

25. ***[Presented to non-self-contained teachers only]***

Within mathematics many teachers feel better prepared to teach some topics than others. How prepared do you feel to teach each of the following topics **at the grade level(s) you teach**, whether or not they are currently included in your curriculum? [Select one on each row.]

	Not adequately prepared	Somewhat prepared	Fairly well prepared	Very well prepared
a. The number system and operations	①	②	③	④
b. Algebraic thinking	①	②	③	④
c. Functions	①	②	③	④
d. Modeling	①	②	③	④
e. Measurement	①	②	③	④
f. Geometry	①	②	③	④
g. Statistics and probability	①	②	③	④
h. Discrete mathematics	①	②	③	④

26. How well prepared do you feel to do each of the following in your mathematics instruction? [Select one on each row.]

	Not adequately prepared	Somewhat prepared	Fairly well prepared	Very well prepared
a. Plan instruction so students at different levels of achievement can increase their understanding of the ideas targeted in each activity	①	②	③	④
b. Teach mathematics to students who have learning disabilities	①	②	③	④
c. Teach mathematics to students who have physical disabilities	①	②	③	④
d. Teach mathematics to English-language learners	①	②	③	④
e. Provide enrichment opportunities for gifted students	①	②	③	④
f. Encourage students' interest in mathematics	①	②	③	④
g. Encourage participation of females in mathematics	①	②	③	④
h. Encourage participation of racial or ethnic minorities in mathematics	①	②	③	④
i. Encourage participation of students from low socioeconomic backgrounds in mathematics	①	②	③	④
j. Manage classroom discipline	①	②	③	④

27. Please provide your opinion about each of the following statements. [Select one on each row.]

	Strongly Disagree	Disagree	No Opinion	Agree	Strongly Agree
a. Students learn mathematics best in classes with students of similar abilities.	①	②	③	④	⑤
b. Inadequacies in students' mathematics background can be overcome by effective teaching.	①	②	③	④	⑤
c. It is better for mathematics instruction to focus on ideas in depth, even if that means covering fewer topics.	①	②	③	④	⑤
d. Students should be provided with the purpose for a lesson as it begins.	①	②	③	④	⑤
e. At the beginning of instruction on a mathematical idea, students should be provided with definitions for new vocabulary that will be used.	①	②	③	④	⑤
f. Teachers should explain an idea to students before having them investigate the idea.	①	②	③	④	⑤
g. Most class periods should include some review of previously covered ideas and skills.	①	②	③	④	⑤
h. Most class periods should provide opportunities for students to share their thinking and reasoning.	①	②	③	④	⑤
i. Hands-on activities/manipulatives should be used primarily to reinforce a mathematical idea that the students have already learned.	①	②	③	④	⑤
j. Students should be assigned homework most days.	①	②	③	④	⑤
k. Most class periods should conclude with a summary of the key ideas addressed.	①	②	③	④	⑤

Section B. Your Mathematics Instruction

The rest of this questionnaire is about your mathematics instruction in this class.

28. ***[Presented to non-self-contained teachers only]***
On average, how many minutes per week does this class meet? [Enter your response as a whole number (for example: 300).] _____

29. Enter the number of students for each grade represented in this class. [Enter each response as a whole number (for example: 15).]

Kindergarten	
1st grade	
2nd grade	
3rd grade	
4th grade	
5th grade	
6th grade	
7th grade	
8th grade	
9th grade	
10th grade	
11th grade	
12th grade	

30. For the students in this class, indicate the number of males and females in each of the following categories of race/ethnicity. [Enter each response as a whole number (for example: 15).]

	Males	**Females**
a. American Indian or Alaska Native		
b. Asian		
c. Black or African American		
d. Hispanic/Latino		
e. Native Hawaiian or Other Pacific Islander		
f. White		
g. Two or more races		

31. Which of the following best describes the prior mathematics achievement levels of the students in this class relative to other students in this school?

○	Mostly low achievers
○	Mostly average achievers
○	Mostly high achievers
○	A mixture of levels

32. How much control do you have over each of the following aspects of mathematics instruction in this class? [Select one on each row.]

	No Control		**Moderate Control**		**Strong Control**
a. Determining course goals and objectives	①	②	③	④	⑤
b. Selecting textbooks/modules	①	②	③	④	⑤
c. Selecting content, topics, and skills to be taught	①	②	③	④	⑤
d. Selecting teaching techniques	①	②	③	④	⑤
e. Determining the amount of homework to be assigned	①	②	③	④	⑤
f. Choosing criteria for grading student performance	①	②	③	④	⑤

33. Think about your plans for this class for the entire course/year. By the end of the course/year, how much emphasis will each of the following student objectives receive? [Select one on each row.]

	None	**Minimal emphasis**	**Moderate emphasis**	**Heavy emphasis**
a. Learning mathematical procedures and/or algorithms	①	②	③	④
b. Learning to perform computations with speed and accuracy	①	②	③	④
c. Understanding mathematical ideas	①	②	③	④
d. Learning mathematical practices (for example: considering how to approach a problem, justifying solutions)	①	②	③	④
e. Learning about real-life applications of mathematics	①	②	③	④
f. Increasing students' interest in mathematics	①	②	③	④
g. Preparing for further study in mathematics	①	②	③	④
h. Learning test taking skills/strategies	①	②	③	④

34. How often do you do each of the following in your mathematics instruction in this class? [Select one on each row.]

	Never	Rarely (for example: a few times a year)	Sometimes (for example: once or twice a month)	Often (for example: once or twice a week)	All or almost all mathematics lessons
a. Explain mathematical ideas to the whole class	①	②	③	④	⑤
b. Engage the whole class in discussions	①	②	③	④	⑤
c. Have students work in small groups	①	②	③	④	⑤
d. Provide manipulatives for students to use in problem-solving/investigations	①	②	③	④	⑤
e. Have students read from a mathematics textbook/program or other mathematics-related material in class, either aloud or to themselves	①	②	③	④	⑤
f. Have students consider multiple representations in solving a problem (for example: numbers, tables, graphs, pictures)	①	②	③	④	⑤
g. Have students explain and justify their method for solving a problem	①	②	③	④	⑤
h. Have students compare and contrast different methods for solving a problem	①	②	③	④	⑤
i. Have students develop mathematical proofs	①	②	③	④	⑤
j. Have students present their solution strategies to the rest of the class	①	②	③	④	⑤
k. Have students write their reflections (for example: in their journals) in class or for homework	①	②	③	④	⑤
l. Give tests and/or quizzes that are predominantly short-answer (for example: multiple choice, true/false, fill in the blank)	①	②	③	④	⑤
m. Give tests and/or quizzes that include constructed-response/open-ended items	①	②	③	④	⑤
n. Focus on literacy skills (for example: informational reading or writing strategies)	①	②	③	④	⑤
o. Have students practice for standardized tests	①	②	③	④	⑤
p. Have students attend presentations by guest speakers focused on mathematics in the workplace	①	②	③	④	⑤

35. Which best describes the availability of each of the following for small group (4-5 students) work in this class? [Select one on each row.]

	Do not have one per group available	At least one per group available upon request or in another room	At least one per group located in your classroom
a. Personal computers, including laptops	○	○	○
b. Hand-held computers (for example: PDAs, tablets, smartphones, iPads)	○	○	○
c. Internet access	○	○	○
d. Four-function calculators	○	○	○
e. Scientific calculators	○	○	○
f. Graphing calculators	○	○	○
g. Probes for collecting data (for example: motion sensors, temperature probes)	○	○	○
h. Classroom response system or "Clickers" (handheld devices used to respond electronically to questions in class)	○	○	○

36. For each of the following, are students expected to provide their own for use in this mathematics class? [Select one on each row.]

	Yes	No
a. Laptop computers	○	○
b. Hand-held computers	○	○
c. Four-function calculators	○	○
d. Scientific calculators	○	○
e. Graphing calculators	○	○

37. How often do students use each of the following instructional technologies in this mathematics class? [Select one on each row.]

	Never	Rarely (for example: A few times a year)	Sometimes (for example: once or twice a month)	Often (for example: once or twice a week)	All or almost all mathematics lessons
a. Personal computers, including laptops	①	②	③	④	⑤
b. Hand-held computers	①	②	③	④	⑤
c. Internet	①	②	③	④	⑤
d. Four-function calculators	①	②	③	④	⑤
e. Scientific calculators	①	②	③	④	⑤
f. Graphing calculators	①	②	③	④	⑤
g. Probes for collecting data	①	②	③	④	⑤
h. Classroom response system or “Clickers”	①	②	③	④	⑤

38. How often are students in this class required to take mathematics tests that you did **not** develop yourself, for example state assessments or district benchmarks? Do **not** include Advanced Placement or International Baccalaureate exams or students retaking a test because of failure.

○	Never
○	Once a year
○	Twice a year
○	Three or four times a year
○	Five or more times a year

39. How much mathematics homework do you assign to this class in a typical **week**? (Do not include time that the class spends getting started on homework during class.)

○	Fewer than 15 minutes per week
○	15-30 minutes per week
○	31-60 minutes per week
○	61-90 minutes per week
○	91-120 minutes per week
○	2 to 3 hours per week
○	3-4 hours per week
○	More than 4 hours per week

40. Which best describes the instructional materials students **most frequently** use in this class?

○	One commercially-published textbook or program most of the time
○	Multiple commercially-published textbooks/programs most of the time ***[Skip to Q42]***
○	Non-commercially-published instructional materials most of the time ***[Skip to Q46]***

41. Please indicate the title, author, most recent copyright year, and ISBN code of the textbook/program used by the students in this class.

- The 10- or 13-character ISBN code can be found on the copyright page and/or the back cover of your textbook/program.
- Do not include the dashes when entering the ISBN.
- An example of the location of the ISBN is shown to the right.

Title:
First Author:
Year:
ISBN:
[Skip to Q43]

42. Please indicate the title, author, most recent copyright year, and ISBN code of the commercially-published textbook/program used most often by the students in this class.

- The 10- or 13-character ISBN code can be found on the copyright page and/or the back cover of your textbook/program.
- Do not include the dashes when entering the ISBN.
- An example of the location of the ISBN is shown to the right.

Title:
First Author:
Year:
ISBN:

43. How would you rate the overall quality of this textbook/program?

○	Very poor
○	Poor
○	Fair
○	Good
○	Very good
○	Excellent

44. ***[Presented only to teachers who indicated using one commercially-published textbook/program in Q40]***

Over the course of the school year, approximately what percentage of the mathematics **instructional time** will students in this class spend using this textbook/program?

○	Less than 25%
○	25-49%
○	50-74%
○	75-90%
○	More than 90%

45. ***[Presented only to teachers who indicated using one commercially-published textbook/program in Q40]***

Approximately what percentage of the chapters/units in this textbook/program will students in this class engage with during the school year?

○	Less than 25%
○	25-49%
○	50-74%
○	75-90%
○	More than 90%

46. Mathematics courses may benefit from the availability of particular resources. Considering what you have available, how adequate is each of the following for teaching this mathematics class? [Select one on each row.]

	Not Adequate		**Somewhat Adequate**		**Adequate**
a. Instructional technology (for example: calculators, computers, probes/sensors)	①	②	③	④	⑤
b. Measurement tools (for example: protractors, rulers)	①	②	③	④	⑤
c. Manipulatives (for example: pattern blocks, algebra tiles)	①	②	③	④	⑤
d. Consumable supplies (for example: graphing paper, batteries)	①	②	③	④	⑤

47. In your opinion, how great a problem is each of the following for your mathematics instruction in this class? [Select one on each row.]

	Not a significant problem	**Somewhat of a problem**	**Serious problem**
a. Lack of access to computers	○	○	○
b. Old age of computers	○	○	○
c. Lack of access to the Internet	○	○	○
d. Unreliability of the Internet connection	○	○	○
e. Slow speed of the Internet connection	○	○	○
f. Lack of availability of appropriate computer software	○	○	○
g. Lack of availability of technology support	○	○	○

48. Please rate the effect of each of the following on your mathematics instruction in this class. [Select one on each row.]

	Inhibits effective instruction		**Neutral or Mixed**		**Promotes effective instruction**	**N/A or Don't Know**
a. Current state standards	①	②	③	④	⑤	○
b. District/Diocese curriculum frameworks ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤	○
c. District/Diocese and/or school pacing guides	①	②	③	④	⑤	○
d. State testing/accountability policies ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤	○
e. District/Diocese testing/accountability policies ***[Not presented to non-Catholic private schools]***	①	②	③	④	⑤	○
f. Textbook/program selection policies	①	②	③	④	⑤	○
g. Teacher evaluation policies	①	②	③	④	⑤	○
h. College entrance requirements ***[Presented to grades 9–12 teachers only]***	①	②	③	④	⑤	○
i. Students' motivation, interest, and effort in mathematics	①	②	③	④	⑤	○
j. Students' reading abilities	①	②	③	④	⑤	○
k. Community views on mathematics instruction	①	②	③	④	⑤	○
l. Parent expectations and involvement	①	②	③	④	⑤	○
m. Principal support	①	②	③	④	⑤	○
n. Time for you to plan, individually and with colleagues	①	②	③	④	⑤	○
o. Time available for your professional development	①	②	③	④	⑤	○

Section C. Your Most Recently Completed Mathematics Unit in this Class

The questions in this section are about the most recently completed mathematics unit in this class.

- Depending on the structure of your class and the instructional materials you use, a unit may range from a few to many class periods.
- Do not be concerned if this unit was not typical of your instruction.

49. How many class periods were devoted to instruction on the **most recently completed mathematics unit**? [Enter your response as a whole number (for example: 15).] _____

50. Which of the following best describes the content focus of this unit?

○	Number and Operations
○	Measurement and Data Representation
○	Algebra
○	Geometry
○	Probability
○	Statistics
○	Trigonometry
○	Calculus

51. What mathematical ideas and/or skills were addressed in this unit? _____

52. ***[Presented only to teachers who indicated using commercially-published textbooks/programs in Q40]***

Was this unit based primarily on the commercially-published textbook/program you described earlier as the one most used in this class?

○	Yes ***[Skip to Q55]***
○	No

53. Was this unit based on a commercially-published textbook/program?

○	Yes
○	No ***[Skip to Q59]***

54. Please indicate the title, author, most recent copyright year, and ISBN code of that textbook/ program.

- The 10- or 13-character ISBN code can be found on the copyright page and/or the back cover of the textbook/module.
- Do not include the dashes when entering the ISBN.
- An example of the location of the ISBN is shown to the right.

Title:
First Author:
Year:
ISBN:

55. Please indicate the extent to which you did each of the following while teaching this unit. [Select one on each row.]

	Not at all		Somewhat		To a great extent
a. You used the textbook/program to guide the overall structure and content emphasis of the unit.	①	②	③	④	⑤
b. You followed the textbook/program to guide the detailed structure and content emphasis of the unit.	①	②	③	④	⑤
c. You picked what is important from the textbook/program and skipped the rest.	①	②	③	④	⑤
d. You incorporated activities (for example: problems, investigations, readings) from other sources to supplement what the textbook/program was lacking.	①	②	③	④	⑤

56. ***[Presented only to teachers who answered "2–5" in Q55c]***

During this unit, when you skipped activities (for example: problems, investigations, readings) in your textbook/program, how much was each of the following a factor in your decisions? [Select one on each row.]

	Not a factor	A minor factor	A major factor
a. The mathematical ideas addressed in the activities you skipped are not included in your pacing guide and/or current state standards.	①	②	③
b. You did not have the materials needed to implement the activities you skipped.	①	②	③
c. The activities you skipped were too difficult for your students.	①	②	③
d. Your students already knew the mathematical ideas or were able to learn them without the activities you skipped.	①	②	③
e. You have different activities for those mathematical ideas that work better than the ones you skipped.	①	②	③

57. ***[Presented only to teachers who answered "2–5" in Q55d]***

During this unit, when you supplemented the textbook/program with additional activities, how much was each of the following a factor in your decisions? [Select one on each row.]

	Not a factor	A minor factor	A major factor
a. Your pacing guide indicated that you should use supplemental activities.	①	②	③
b. Supplemental activities were needed to prepare students for standardized tests.	①	②	③
c. Supplemental activities were needed to provide students with additional practice.	①	②	③
d. Supplemental activities were needed so students at different levels of achievement could increase their understanding of the ideas targeted in each activity.	①	②	③

58. How well prepared did you feel to do each of the following as part of your instruction on this particular unit? [Select one on each row.]

	Not adequately prepared	Somewhat prepared	Fairly well prepared	Very well prepared
a. Anticipate difficulties that students will have with particular mathematical ideas and procedures in this unit	①	②	③	④
b. Find out what students thought or already knew about the key mathematical ideas	①	②	③	④
c. Implement the mathematics textbook/ program to be used during this unit ***[Presented only to teachers who indicated using a commercially-published textbook/program in Q52/53]***	①	②	③	④
d. Monitor student understanding during this unit	①	②	③	④
e. Assess student understanding at the conclusion of this unit	①	②	③	④

59. Which of the following did you do during this unit? [Select all that apply.]

□	Administered an assessment, task, or probe at the beginning of the unit to find out what students thought or already knew about the key mathematical ideas
□	Questioned individual students during class activities to see if they were "getting it"
□	Used information from informal assessments of the entire class (for example: asking for a show of hands, thumbs up/thumbs down, clickers, exit tickets) to see if students were "getting it"
□	Reviewed student work (for example: homework, notebooks, journals, portfolios, projects) to see if they were "getting it"
□	Administered one or more quizzes and/or tests to see if students were "getting it"
□	Had students use rubrics to examine their own or their classmates' work
□	Assigned grades to student work (for example: homework, notebooks, journals, portfolios, projects)
□	Administered one or more quizzes and/or tests to assign grades
□	Went over the correct answers to assignments, quizzes, and/or tests with the class as a whole

Section D. Your Most Recent Mathematics Lesson in this Class

The next three questions refer to the most recent mathematics lesson in this class, whether or not that instruction was part of the unit you've just been describing. Do not be concerned if this lesson included activities and/or interruptions that are not typical (for example: a test, students working on projects, a fire drill).

60. How many minutes was that lesson? [Enter your response as a non-zero whole number (for example: 50).] _____

61. Of these minutes, how many were spent on the following: [Enter each response as a whole number (for example: 15).]

a. Non-instructional activities (for example: attendance taking, interruptions) ____
b. Whole class activities (for example: lectures, explanations, discussions) ____
c. Small group work ___
d. Students working individually (for example: reading textbooks, completing worksheets, taking a test or quiz) ___

62. Which of the following activities took place during that mathematics lesson? [Select all that apply.]

□	Teacher explaining a mathematical idea to the whole class
□	Whole class discussion
□	Students completing textbook/worksheet problems
□	Teacher conducting a demonstration while students watched
□	Students doing hands-on/manipulative activities
□	Students reading about mathematics
□	Students using instructional technology
□	Practicing for standardized tests
□	Test or quiz
□	None of the above

Section E. Demographic Information

63. Indicate your sex:

○	Male
○	Female

64. Are you of Hispanic or Latino origin?

○	Yes
○	No

65. What is your race? [Select all that apply.]

□	American Indian or Alaska Native
□	Asian
□	Black or African American
□	Native Hawaiian or Other Pacific Islander
□	White

66. In what year were you born? [Enter your response as a whole number (for example: 1969). Do not use commas.] _____

Thank you!