

PARTICIPANT INFORMATION SHEET

"Entry"

Last four digits of your social security number _ _ _ _

Today's date _____

1. Which best describes the location of your school? (*Circle one.*)

Rural

Urban, but not inner city

Urban, inner city

Suburban

2. This school is (*Circle one*):

Public

Private

3. What grade level(s) do you currently teach (*Circle all that apply.*)

Elementary School K 1 2 3 4 5 6

Middle School 6 7 8 9

Junior High School 7 8 9

High School 9 10 11 12

4. What is the *approximate* ethnic composition of your school?

Native American _____%

Asian or Pacific Islander _____%

Hispanic (regardless of race) _____%

African American _____%

White (not of Hispanic origin) _____%

TOTAL 100 %

5. What is the *approximate* socioeconomic composition of your school?

At or below the poverty level _____%

Low income _____%

Middle income _____%

Upper-middle income _____%

High income _____%

TOTAL 100 %

6. What is the total number of students you teach per day?

_____ students

7. _____ How often do students in your

classes participate in each of the following during science instruction?

(Circle one on each line.)

	Almost every <u>day</u>	Once or twice <u>a week</u>	Once or twice <u>a month</u>	Once or twice a <u>semester</u>	Never or <u>ever</u>
hardly					
a.	work in groups 4		1 5	2	3
b.	work on long-term projects 3		4 5	1	2
c.	listen and take notes 4		1 5	2	3
d.	write a report/paper 4		1 5	2	3
e.	write in journals or logs 4		1 5	2	3
f.	collect and interpret data 3		4 5	1	2
g.	follow procedures to do an investigation or solve a problem 3		4 5	1	2
h.	review homework in class 3		4 5	1	2
i.	engage in out-of-class activities (including fieldtrips) 4		1 5	2	3
j.	complete worksheets or answer written questions in class 3		4 5	1	2
k.	give oral reports or presentations of their work 4		1 5	2	3
l.	design experiments or solve novel problems 4		1 5	2	3
m.	use a computer for other than word processing 4		1 5	2	3
n.	use manipulatives/ equipment (not calculators) 4		1 5	2	3
o.	use a calculator (including graphing				

	calculators)	1	2	3	4
		5			
p.	use computer-based technologies (e.g., CD-ROM, modems)			1	2
		3	4	5	
q.	use a textbook to do assignments in class	1	2	3	4
		5			
r.	read a textbook in class	1	2	3	
		4	5		
s.	discuss a science- mathematics- technology-related news event			1	2
		3	4	5	
t.	use critical thinking skills such as problem-solving and/or decision-making		1	2	3
		4	5		

8. Below are five pairs of statements. Each pair represents opposite ends of a continuum in approaches to teaching. After reading a pair of statements *circle a position on the line* between the statements indicating where you would place your approach (e.g., toward one end, the other, or somewhat in between).

Pair #1

A. My primary goal is to help students learn terms and formulas and to master science/mathematics/mathematics/technology skills.

B. My primary goal is to help students achieve a deeper understanding of key science/technology concepts and principles.

1 2 3 4 5 6 7

Pair #2

A. In my science/mathematics/mathematics technology course, I aim for *in-depth* study of selected topics and issues even if it means sacrificing coverage.

B. In my science/technology course, I aim for *comprehensive* coverage even if it means sacrificing in-depth study.

1 2 3 4 5 6 7

Pair #3

A. My students generally learn basic scientific terms and formulas *before* learning underlying concepts and

B. My students generally learn basic scientific terms and formulas *while* learning underlying concepts and

principles.

1 2 3 4 5 6 7

principles.

Pair #4

A. In my science/
mathematics/technology
class, laboratory
investigations and problem
problem
solving are used to confirm
introduce
previously-learned concepts.

1 2 3 4 5 6 7

B. In my science/
mathematics/technology
class, laboratory
investigations and
solving are used to
and explore concepts.

Pair #5

A. I primarily assess my
students' learning based on
on their ability to apply their
knowledge to new situations.

1 2 3 4 5 6 7

B. I primarily assess my
students' learning based
their ability to answer
questions about specific
content and processes.

9. The following is a list of objectives that teachers often state as being important in teaching science/mathematics/technology. Please rank the five (5) you feel are most important by putting a '1' next to the one you consider **most** important, a '2' next to the one you feel is next most important, and so on down to '5.'

(Rank order the top five
most important)

_____ mathematics/technology

a. increase students' interest in science/

_____ learning

b. develop/increase a positive attitude about

_____ mathematics/

c. prepare students for further study in science/
technology

_____ science/mathematics/

d. increase students' knowledge of important
technology facts

_____ science/mathematics/

e. increase students' awareness and importance of
technology in their daily lives

_____ science/mathematics/

f. increase students' awareness of careers in
technology

_____ mathematics/technology

g. integrate teaching and learning of science/

_____ technology techniques

_____ inquiry skills

_____ mathematics/technology

_____ (cooperatively/collaboratively)

_____)

h. develop students' skill in science/mathematics/ and processes

i. develop students' skill in problem-solving and

j. develop students' understanding of science/ principles

k. develop students' skills in working together

l. other important goal (please specify

10. Indicate the degree to which you agree or disagree with each of the following statements.

(Circle one on each line.)

	Strongly <u>Agree</u>	<u>Agree</u>	<u>Disagree</u>	Strongly <u>Disagree</u>
a.	I am comfortable with my current level of science/mathematics/technology knowledge	1	2	3
		4		
b.	I feel comfortable teaching science/mathematics/technology	1	2	3
			4	
c.	I feel comfortable managing a class of students who are doing hands-on activities	1	2	3
				4
d.	I feel comfortable demonstrating science, mathematics/technology principles to my students	1	2	3
		4		
e.	I feel confident in my ability to discuss science/mathematics/technology applications with my students	1	2	3
			4	
f.	I feel confident in my ability to help my students answer their own questions	1	2	3
				4
g.	I feel confident in my ability to			

supervise my students' research
 projects and experiments 1 2
 3 4

11. Put a check in front of those elements that are applicable in your school in relation to science/mathematics/technology. For those that are applicable, please indicate the extent of influence each has on your teaching.

(Circle one on each line.)

(Check if applicable in

your school) Extensive Some Little
 No
Influence Influence Influence Influence

 4

a. State curriculum guide
 or framework 1 2 3

 4

b. District curriculum
 guide or framework 1 2 3

 3

c. National standards (e.g.,
 Benchmarks, NCTM standards) 1 2
 4

 3

d. Local improvement effort
 (such as science, mathematics,
 4 and/or technology reform) 1 2

 4

e. State-mandated test 1 2 3

 4

f. District- or department-
 mandated test 1 2 3

 4

g. Textbook program (commercially-
 developed) 1 2 3 4

 2

h. Self-developed curriculum or course 1
 3 4

 4

i. Laboratory facilities, equipment,
 and supplies 1 2 3

 3

j. Availability of computers 1 2
 4

 3

k. Parentalcommunity involvement 1 2
 4

 2

l. My own science content background 1
 3 4

 2

m. My own interests and experience 1
 3 4

 4

n. What other teachers with classes
 like this are doing 1 2 3

12. How much does your school provide each of the following types of support for teaching your science /mathematics/ technology class?

(Circle one on each line.)

Very Much Somewhat A Little Not at All

- | | | | | | |
|----|--|---|---|---|---|
| a. | resources to implement what I learn through professional development activities | 1 | 2 | 3 | 4 |
| b. | encouragement to implement what I learn through professional development activities | 1 | 2 | 3 | 4 |
| c. | time to develop materials in order to implement what I learn through professional development activities | 1 | 2 | 3 | 4 |
| d. | flexibility to choose topics covered in courses I teach | 1 | 2 | 3 | 4 |
| e. | yearly budget to obtain materials | 1 | 2 | 3 | 4 |

13. Indicate the highest level of education you have earned and indicate the degree (e.g., B.S., B.A., M.S., M.A., M.Ed., MA/LS, Ed.D., Ph.D.)

Degree _____

14. How many credits do you have beyond this degree? (Please indicate whether they are semester credits, quarter credits, or how many of each.)

Credits (semester hours) _____ Credits (quarter hours) _____

15. Since the beginning of this school year, how much time per month (on average) have you spent meeting informally with other teachers on lesson planning, curriculum development, or other instructional matters? (Circle one.)

no time at all

less than 30 minutes

30 minutes to 1 hour

1 - 5 hours

5 hours -10 hours

10 hours or more

16. How many inservice or other workshops have you conducted in the last five years? (Circle one.)

0

1-3

4-6

more than 6

17. How many presentations have you given to professional groups (e.g., NSTA) in the last five years? (Circle one.)

0

1-3

4-6

more than 6

18. How many years have you taught the following? (Fill in the blank for all that apply.)

Science _____

Mathematics _____

Vocational Technology _____

FOLLOW-UP QUESTIONNAIRE

Last four digits of your social security number _ _ _ _

Today's date _____

1. What grade level(s) do you currently teach (Circle all that apply.)

Elementary School K 1 2 3 4 5 6

Middle School 6 7 8 9

Junior High School 7 8 9

High School 9 10 11 12

2. To what extent do you agree with each of the following statements about what has occurred since your participation in the program.

(Circle **one** on each line.)

	small	Not at	To a great	To some	To a
	<u>extent</u>	<u>all</u>	<u>extent</u>	<u>extent</u>	
a.	I have drawn on my program experiences for explanations and		examples in my teaching		1 2 3 4
b.	I have drawn on my program experiences for ideas for student independent projects				1 2

c.	I have made curriculum changes based on what I have learned in the program	1 4	2 3
d.	I have developed new materials for the course(s) I teach	3 4	1 2
e.	I have shared my experience/ knowledge from the program with colleagues informally	3 4	1 2
f.	I have been responsible for conducting inservice or workshop activities using ideas from the program	3 4	1 2
g.	I have made presentations to professional groups using ideas from my program experience	1 4	2 3
h.	I have become/ remain involved in efforts to improve teaching and learning (e.g., reform efforts) in my school or school district	1 4	2 3

3. Below are five pairs of statements. Each pair represents opposite ends of a continuum in approaches to teaching. After reading a pair of statements *circle a position on the line* between the statements indicating where you would place your approach (e.g., toward one end, the other, or somewhat in between).

Pair #1

A. My primary goal is to help students learn terms and formulas and to master science/mathematics/mathematics/technology skills.

B. My primary goal is to help students achieve a deeper understanding of key science/technology concepts and principles.

1 2 3 4 5 6 7

Pair #2

A. In my science/mathematics/mathematics technology course, I aim for *in-depth* study of selected topics and issues even if it means sacrificing coverage.

B. In my science/technology course, I aim for *comprehensive* coverage even if it means sacrificing in-depth study.

1 2 3 4 5 6 7

Pair #3

A. My students generally learn basic scientific terms and formulas *before* learning underlying concepts and principles.

B. My students generally learn basic scientific terms and formulas *while* learning underlying concepts and principles.

1 2 3 4 5 6 7

Pair #4

A. In my science/mathematics/technology class, laboratory investigations and problem solving are used to confirm previously-learned concepts.

B. In my science/mathematics/technology class, laboratory investigations and solving are used to and explore concepts.

1 2 3 4 5 6 7

Pair #5

A. I primarily assess my students' learning based on their ability to apply their knowledge to new situations.

B. I primarily assess my students' learning based on their ability to answer questions about specific content and processes.

1 2 3 4 5 6 7

4. The following is a list of objectives that teachers often state as being important in teaching science/mathematics/technology. Please rank the five (5) you feel are most important by putting a '1' next to the one you consider **most** important, a '2' next to the one you feel is next most important, and so on down to '5.'

(Rank order the top five most important)

_____ mathematics/technology

a. increase students' interest in science/

_____ learning

b. develop/increase a positive attitude about

_____ mathematics/

c. prepare students for further study in science/technology

_____ science/mathematics/

d. increase students' knowledge of important technology facts

_____ science/mathematics/

e. increase students' awareness and importance of

_____ science/mathematics/
 _____ mathematics/technology
 _____ technology techniques
 _____ inquiry skills
 _____ mathematics/technology
 _____ (cooperatively/collaboratively)

- technology in their daily lives
- f. increase students' awareness of careers in technology
- g. integrate teaching and learning of science/
- h. develop students' skill in science/mathematics/ and processes
- i. develop students' skill in problem-solving and
- j. develop students' understanding of science/ principles
- k. develop students' skills in working together
- l. other important goal (please specify _____)

5. How often do students in your classes participate in each of the following during science instruction?

(Circle **one** on each line.)

	Almost every day	Once or twice a week	Once or twice a month	Once or twice a semester	Never or ever
a.	hardly		work in groups	1 2 3	4 5
b.			work on long-term projects	1 2 3	4 5
c.			listen and take notes	1 2 3	4 5
d.			write a report/paper	1 2 3	4 5
e.			write in journals or logs	1 2 3	4 5
f.			collect and interpret data	1 2 3	4 5
g.			follow procedures to do an		

- a. I am comfortable with my current level of science/mathematics/technology knowledge 1 2 3 4
- b. I feel comfortable teaching science/mathematics/technology 1 2 3 4
- c. I feel comfortable managing a class of students who are doing hands-on activities 1 2 3 4
- d. I feel comfortable demonstrating science, mathematics/technology principles to my students 1 2 3 4
- e. I feel confident in my ability to discuss science/mathematics/technology applications with my students 1 2 3 4
- f. I feel confident in my ability to help my students answer their own questions 1 2 3 4
- g. I feel confident in my ability to supervise my students' research projects and experiments 1 2 3 4

7. Put a check in front of those elements that are applicable in your school in relation to science/mathematics/technology. For those that are applicable, please indicate the extent of influence each has on your teaching.

(Circle one for each that

applies.)

(Check if applicable in your school)

	Extensive <u>Influence</u>	Some <u>Influence</u>	Little <u>Influence</u>	No <u>Influence</u>

4				

4				

3				

3				

a. State curriculum guide or framework 1 2 3

b. District curriculum guide or framework 1 2 3

c. National standards (e.g., Benchmarks, NCTM standards) 1 2 4

d. Local improvement effort (such as science, mathematics, and/or technology reform) 1 2 4

_____	e. State-mandated test	1	2	3
4				
_____	f. District- or department-			
4	mandated test	1	2	3
_____	g. Textbook program (commercially-			
	developed)	1	2	3 4
_____	h. Self-developed curriculum or course			
2		3	4	1
_____	i. Laboratory facilities, equipment,			
4	and supplies	1	2	3
_____	j. Availability of computers		1	2
3		4		
_____	k. Parental/community involvement	1	2	
3		4		
_____	l. My own science content background			
2		3	4	1
_____	m. My own interests and experience			
2		3	4	1
_____	n. What other teachers with classes			
4	like this are doing	1	2	3

8. How much does your school provide each of the following types of support for teaching your science/mathematics/technology class?

(Circle **one** on each line.)

Very Much Somewhat A Little Not at All

a.	resources to implement what I learn through professional development activities	1	2	3	4
b.	encouragement to implement what I learn through professional development activities	1	2	3	4
c.	time to develop materials in order to implement what I learn through professional development activities	1	2	3	4
d.	flexibility to choose topics covered in courses I teach	1	2	3	4
e.	yearly budget to obtain materials	1	2	3	4

9a. If you are a high school, junior high school or middle school teacher:

How many years have you taught the following? (Fill in the blank for all that

apply.)

Science _____

Mathematics _____

Vocational Technology _____

9b. If you are an elementary school teacher:

Approximately how much time per day on average do you spend teaching science and/or integrating science into what you teach? (Circle one)

20 minutes or less

20-30 minutes

30-45 minutes

45 minutes to one hour

one hour or more

10. How are your students this year engaged in ways of doing and thinking about science/mathematics/technology that were not evident in your students last year?

SUPPLEMENTAL QUESTIONS

- How many of the following classes do you teach each day? (Fill in blanks for each subject taught.)

	Number of Classes	Number of Students
--	-------------------	--------------------

Science	_____	_____
---------	-------	-------

Mathematics	_____	_____
-------------	-------	-------

Technical/vocational	_____	_____
----------------------	-------	-------

Other subject class	_____	_____
---------------------	-------	-------

(subject: _____)

- Which best describes the ability levels of your students in your classes

(Indicate how many classes you teach in each category)?

Fairly homogeneous and low in ability _____ classes

Fairly homogeneous and average in ability _____ classes

Fairly homogeneous and high in ability _____ classes

Heterogeneous, with a mixture of two or more abilities _____ classes

- Please indicate below the subject areas and grade levels you are certified to teach in your state.

Subject(s) _____

Grade Level(s) _____

- How many years have you taught the following? (Fill in the blank for all that apply.)

Science _____ years

Mathematics _____ years

Vocational/Technology _____ years

- In what field(s) do you have a major or minor at the undergraduate level? (Circle Major or Minor for those that apply. Choose no more than 1 or 2 majors and 1 to 3 minors.)

Mathematics	Major	Minor
Computer Science	Major	Minor
Physical Science	Major	Minor
Chemistry	Major	Minor
Biological Sciences	Major	Minor
Earth/Space Sciences	Major	Minor
Science Education	Major	Minor
Mathematics Education	Major	Minor
Other Education	Major	Minor
Other (specify) _____	Major	Minor

Do you have an advanced degree? If no, go to question XX.

- In what field(s) do you have a major or minor at the graduate level? (Circle Major or Minor for those that apply. Choose no

more than 1 or 2 majors and 1 to 3 minors.)

Mathematics	Major	Minor
Computer Science	Major	Minor
Physical Science	Major	Minor
Chemistry	Major	Minor
Biological Sciences	Major	Minor
Earth/Space Sciences	Major	Minor
Science Education	Major	Minor
Mathematics Education	Major	Minor
Other Education	Major	Minor
Other (specify) _____	Major	Minor

- Indicate your expectations in regard to the program (either during the program or as a result of your participation).

(Circle one on each line.)

	I do not expect this will occur	I am not sure this will occur	I expect this will occur
a. interact daily with Laboratory staff	1	2	3
b. observe scientific research in the laboratory	1	2	3
c. participate in actual research in the laboratory	1	2	3
d. contribute to ongoing research in the laboratory	1	2	3
e. increase my science/mathematics/technology content knowledge	1	2	3
f. increase my knowledge of applications in science/mathematics/technology	1	2	3
g. gain new perspectives on how science/mathematics/technology should best be taught	1	2	3

h.	learn about activities I can use in my classroom	1	2	3
i.	develop activities I can use in my classroom	1	2	3
j.	use computers	1	2	3
k.	work in a specialty related to courses I teach	1	2	3
l.	be able to significantly influence my assignments and activities to serve my needs	1	2	3

”Exit” QUESTIONS - To determine satisfaction with the program; administered immediately following program participation (such as after a two-week summer workshop)

Last four digits of your social security number ___ ___ ___ ___

Today’s date _____

- Rate the following aspects of the program.

(Circle one on each line.)

	<u>Excellent</u>	<u>Very Good</u>	<u>Good</u>	<u>Fair</u>	<u>Poor</u>
a. Program administration	1	2	3	4	5
b. Advance communication	1	2	3	4	5
c. Orientation	1	2	3	4	5
d. Availability of resources	1	2	3	4	5
e. Assistance provided by program staff	1	2	3	4	5
f. Workshop leaders	1	2	3	4	5
g. Relationship with mentor	1	2	3	4	5
h. Part of a research team	1	2	3	4	5
g. Interactions with other teachers	1	2	3	4	5
h. Interactions with Lab scientists	1	2	3	4	5
i. Receiving advice and support for sharing experience	1	2	3	4	5
j. Receiving support for extending experience to the classroom	1	2	3	4	5

List any specific strengths and weaknesses you would like the program staff to know about:

- Give your opinion about the program with regard to each of the following statements:

(Circle one on each line.)

<u>Applicable</u>	<u>Strongly Agree</u>	<u>Strongly Agree</u>	<u>Disagree</u>	<u>Not Disagree</u>	
a. The program staff made me feel welcome A	1	2	3	4	N/
b. The program staff responded effectively to my questions A	1	2	3	4	N/
c. The program staff was receptive to my suggestions for program improvement A	1	2	3	4	N/
d. The materials that were provided will be of use in the classroom A	1	2	3	4	N/
e. The program provided ideas for ways to present content to my students A	1	2	3	4	N/
f. Objectives of the program were met A	1	2	3	4	N/
g. My research/task had a definable output or end point					
h. My research/task was meaningful to me A	1	2	3	4	N/
i. The presentations during the program were well organized A	1	2	3	4	N/
j. I had significant opportunity to influence my summer experience to meet my needs A	1	2	3	4	N/
k. I had significant opportunity to interact with scientists/technicians A	1	2	3	4	N/
l. I had significant opportunity to interact with other teachers A	1	2	3	4	N/
m. I observed scientific research in the laboratory A	1	2	3	4	N/
n. I participated in actual research in the laboratory A	1	2	3	4	N/

o.	I contributed to ongoing research in the laboratory	1	2	3	4	N/A
A						
p.	I increased my science/mathematics/technology content knowledge	1	2	3	4	N/A
A						
q.	I increased my knowledge of applications in science/mathematics/technology	1	2	3	4	N/A
A						
r.	I gained new perspectives on how science/mathematics/technology should be taught	1	2	3	4	N/A
A						
s.	I learned laboratory skills that I can teach to my students	1	2	3	4	N/A
A						
t.	I increased my science/mathematics/technology content knowledge	1	2	3	4	N/A
A						

- For you (personally and/or professionally) what is the most important thing you gained from your program experience? (Use the back of this sheet if you need more room.)