FOLLOWUP SURVEY OF

HIGH SCHOOL CHEMISTRY TEACHERS

SWEPT Evaluation

I. YOUR INSTRUCTIONAL PRACTICES

Questions 1 through 15 ask you to reflect on your instructional practices in the class or classes in which student assessments are being administered. Please write the title of this course (e.g., Chemistry, Integrated Science, etc.) in the space provided. If student assessments are being administered in two different courses, please select the one for which there is a comparison teacher at your school.

Title of course _____

NOTE: The duration of high school courses can vary (e.g., 1 semester, 2 semesters, or a trimester), and students' schedules may change mid-year. Therefore, please reflect on your teaching practices and experiences since you began teaching the class of students currently enrolled in this course when answering these questions.

1. In this course, how much emphasis did you give to each of the following goals or objectives? *(Circle one number on each line.)*

	None	Minor	Moderate	Major
a. Integrating the course curriculum with other subjects or fields of study	1	2	3	4
b. Teaching facts, rules, or vocabulary	1	2	3	4
c. Showing the importance of the subject in everyday life	1	2	3	4
d. Increasing students' interest in the subject and in pursuing further study	1	2	3	4
e. Encouraging students to explore alternative explanations or methods for solving problems	1	2	3	4
f. Preparing students for taking standardized tests in the subject	1	2	3	4
g. Fully covering the course curriculum as prescribed by the school/district/state	1	2	3	4
h. In-depth study of selected topics or issues, as opposed to exposure to a broad range of topics	1	2	3	4
i. Understanding the theoretical concepts and ideas underlying scientific or mathematical applications	1	2	3	4

2. Approximately how often did you use each of the following teaching methods in this course? *(Circle one number on each line.)*

	Never	1-2 times a month	1-2 times a week	Almost every class	Every class
a. Lecture or talk to the whole class	1	2	3	4	5
b. Teacher-led whole-class discussions	1	2	3	4	5
c. Students responding orally to questions on subject matter covered in class or homework	1	2	3	4	5
d. Student-led whole-group discussions or presentations	1	2	3	4	5
e. Students working together in cooperative groups	1	2	3	4	5
f. Reviewing homework or other assignments	1	2	3	4	5

3. Approximately how often did you have students engage in the following learning activities in this course? *(Circle one number on each line.)*

	Never	1-2 times a month	1-2 times a week	Almost every class	Every class
a. Work on hands-on activities (e.g., doing lab activities or using manipulatives)	1	2	3	4	5
b. Reflect on course material by writing in a notebook or journal	1	2	3	4	5
c. Use calculators or computers for learning, practicing skills, or solving problems	1	2	3	4	5
d. Work individually on written work or assignments in a workbook or textbook	1	2	3	4	5
e. Critique/evaluate their own or other students' class work or homework	1	2	3	4	5
f. Consider a real-world problem relevant to the course and develop a plan to address it	1	2	3	4	5
g. Use primary sources (e.g., academic or professional journals) to investigate current issues or new developments in science, mathematics, or technology	1	2	3	4	5
h. Listen to guest speakers or go on field trips relevant to the material studied in class	1	2	3	4	5
i. Investigate possible career opportunities in science, mathematics, or technology	1	2	3	4	5
j. Design or implement their own scientific investigation, mathematical theory, or proof	1	2	3	4	5
k. Use state-of-the-art equipment or technologies *(Specify types)* _____	1	2	3	4	5

4. On average, approximately what percentage of your planning and preparation time for this course did you spend on each of the following activities? *(Circle one number on each line.)*

	0	1 - 9 percent	10 -19 percent	20 -29 percent	30 - 49 percent	50 percent or more
a. Revising current lessons/curriculum units	1	2	3	4	5	6
b. Creating new lessons/curriculum units	1	2	3	4	5	6
c. Contacting community resources, including making arrangements for speakers, tours, etc.	1	2	3	4	5	6
d. Using the Internet to access materials	1	2	3	4	5	6
e. Using the Internet to network with colleagues	1	2	3	4	5	6
f. Consulting with experts or professional scientists/mathematicians	1	2	3	4	5	6
g. Using a reflective teaching journal	1	2	3	4	5	6
h. Learning to use science or mathematics kits	1	2	3	4	5	6
i. Improving computer and/or software skills	1	2	3	4	5	6
j. Writing grants to secure funding for new programs and/or equipment	1	2	3	4	5	6
k. Interacting with the other teachers at your school to coordinate lessons/activities	1	2	3	4	5	6
l. Responding to e-mail you received from students	1	2	3	4	5	6

5. During a typical week, approximately how much time did you spend outside of regular school hours on planning and preparing for teaching this course?

   Number of hours _____

6. Which textbook (or commercially prepared workbook) constitutes the primary resource that you used in this course?

   (NOTE: If you used NO textbook or workbook in this course, skip to question 11.)

   Title: _____
   Author: _____
   Publisher: _____
   Publication date/edition: _____ / _____

7. Approximately what percentage of this textbook/workbook did you cover in this course? _____%

8. Did you use the tests that the publishers included with the textbook/workbook? *(Circle only one.)*

   Rarely or never 1
   Sometimes 2
   Frequently 3

9. Please give your opinion about each of the following statements as related to this textbook/workbook. *(Circle one number on each line.)*

This textbook:	**Strongly disagree**	**Disagree**	**Not sure**	**Agree**	**Strongly agree**
a. Is at a reading level that is appropriate for most of the students taking this course	1	2	3	4	5
b. Helps develop problem-solving skills.....	1	2	3	4	5
c. Provides good review questions and problem sets ..	1	2	3	4	5
d. Explains concepts clearly	1	2	3	4	5
e. Provides challenging suggestions for projects, further reading, and other assignments	1	2	3	4	5
f. Covers the right range of topics.....	1	2	3	4	5
g. Satisfactorily covers topics in depth.....	1	2	3	4	5
h. Makes interdisciplinary connections between subject areas.....	1	2	3	4	5
i. Is considered interesting by most students taking this course.....	1	2	3	4	5
j. Other *(specify)* _____	1	2	3	4	5

10. If you disagreed with any of the items in question 9, above, please briefly describe the problems you have seen with this textbook/workbook.

    _____

    _____

    _____

11. To what extent did you use each of the following types of assessment to determine student progress and achievement in this course? *(Circle one number on each line.)*

	Not at all	Slight extent	Moderate extent	Great extent
a. Pre-tests before beginning a new unit	1	2	3	4
b. Short-answer tests (e.g., multiple choice, true/false, fill-in-the-blank)	1	2	3	4
c. Tests requiring open-ended responses (e.g., descriptions, justifications, explanations)	1	2	3	4
d. Student portfolios	1	2	3	4
e. Class participation/group discussion	1	2	3	4
f. Student presentations/projects	1	2	3	4
g. Hands-on performance measurements	1	2	3	4
h. Written explanations of thought processes (e.g., journals, essays)	1	2	3	4

12. Did you have a student teacher assigned to you at any time during which you taught the group of students currently enrolled in this course?

    Yes 1
    No..... 2 *(Skip to question 16.)*

    NOTE: If you are a SWEPT teacher with two classes of students being assessed, please provide the following information for the class to which the student teacher was assigned.

    a. Course title _____
    b. Class period, or block _____
    c. Days of the week that the class meets _____
    d. Number of hours each week that the class meets _____

13. At any time did the student teacher take **full responsibility** for teaching the class?

    Yes 1
    No..... 2 *(Skip to question 16.)*

14. For how many weeks did the student teacher take over teaching this class?

    Number of weeks _____

15. Please list the topic(s) or unit(s) that were taught by the student teacher during the time that he or she took over teaching this class.

    _____
    _____
    _____

II. YOUR ATTITUDES AND BELIEFS ABOUT TEACHING

16. Please indicate how confident you feel about the following aspects of your teaching **at this time**. *(Circle one number on each line.)*

	Not at all	Slightly confident	Moderately confident	Very confident
a. Your knowledge about the application of the subject to everyday life	1	2	3	4
b. Your ability to advise students about job opportunities in the subject area	1	2	3	4
c. Your ability to advise students about opportunities to receive further training/experience in the subject area	1	2	3	4
d. Your ability to use inquiry-based instructional practices	1	2	3	4
e. Your ability to determine the depth, breadth, and pace of coverage of material in your teaching	1	2	3	4
f. Your ability to develop appropriate and authentic assessment tools	1	2	3	4
g. Your ability to supervise your students' research projects	1	2	3	4
h. Your ability to mentor beginning teachers	1	2	3	4
i. Your ability to make presentations at teacher inservices or professional meetings	1	2	3	4
j. Your ability to incorporate technology (computers, the Internet, laser disks, etc.) into your teaching	1	2	3	4

17. To what extent do you feel each of the following statements describes the kind of teacher you are **at this time?** *(Circle one number on each line.)*

	Not at all	Slight extent	Moderate extent	Great extent
a. I am motivated to expand on the instructional techniques that I use	1	2	3	4
b. I am motivated to change the way I use hands-on materials and manipulatives in my teaching	1	2	3	4
c. I am motivated to use more technology in my teaching	1	2	3	4
d. I consider myself a "subject matter expert" in my main teaching field	1	2	3	4
e. I consider preparing students for the kinds of expectations they will encounter in a work setting as an important part of my job	1	2	3	4
f. I believe I can truly make a difference in the lives of my students in terms of their choices for further education and their careers	1	2	3	4

18. What do you consider to be your greatest strengths as a teacher? Please be as specific as you can. Think about both areas of content mastery and instructional strategies when answering this question.

_____

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19. What areas of your teaching do you think need improvement? Think about both areas of content mastery and instructional strategies when answering this question.

_____

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III. YOUR SCIENCE CURRICULUM

Questions 20 and 21 ask about the science topics that you covered in this course since it began (i.e., since the current class of students enrolled). Question 20 asks about some skills that might be included in any science course. Question 21 provides a framework of specific content areas and categories that might be included in a chemistry course. Under each category is a list of one or more bulleted topics. Please indicate which of these topics you covered in this course by placing a check on the line provided.

20. The following skills might be included in any science curriculum. Please put a check next to the skills that you covered in this course.

		Check if covered
a.	Interpret and draw conclusions from tables and graphs	_____
b.	Understand correct use of experimental controls	_____
c.	Know correct use of laboratory apparatus.....	_____
d.	Know how to make solutions of a given concentration	_____

21. The following content areas and topics might be included in a chemistry or physical science curriculum. Please put a check next to the bulleted topics that you covered in this course.

	Check if covered
A. Properties of Matter	
1. Physical properties	
• Know some of the physical properties of matter	_____
• Know the meaning of STP	_____
• Understand the interrelationships of density, volume, pressure, and temperature	_____
• Determine the specific heat of a substance	_____
• Understand Avogadro's Principle (number)	_____
2. Chemical properties	
• Understand some chemical properties of given substances, such as carbon dioxide and oxygen	_____
• Distinguish between chemical and physical properties (e.g., rusting and combustion)	_____
3. States of matter	
• Understand that matter can be found in different states as determined by physical changes such as freezing, boiling, or evaporation	_____
• Interpret graphs relating to the physical properties of water	_____
4. Classification of matter	
• Understand how certain forms of matter are classified	_____
5. Solubility	
• Define solubility and determine the factors affecting solubility, such as pressure and temperature	_____
• Interpret a solubility graph	_____
• Know the definition of a saturated solution	_____
• Understand how to make a molar solution	_____
B. Atoms, Elements, and Molecules	
1. Atomic structure	
• Understand what constitutes an ion	_____
• Identify the three basic particles of matter, their charges, and relative masses	_____
2. Symbols and formulae	
• Understand the meaning of chemical symbols and formulae	_____
• Know the rules necessary to write chemical formulae	_____
3. Chemical equations	
• Understand that quantities in a chemical reaction are based on stoichiometric relationships	_____
• Know how to balance a chemical equation	_____
4. Periodic table	
• Recognize that the placement of elements on the periodic table is a function of their atomic structure	_____
• Use the periodic table to predict activity and electronegativity	_____
5. Bonding	
• Differentiate between ionic and covalent bonds	_____
• Understand electron configurations	_____
• Understand the makeup of matter in terms of molecular structure and attractive forces (intramolecular and intermolecular bonding)	_____
• Understand the relationship between the properties of a molecule and its structure	_____

C. Chemical and Nuclear Reactions

1. Energy and changes of state

- Understand kinetic molecular theory..... _____
- Know how changes of state impact heat content..... _____

2. Chemical reactions

- Recognize examples and know products of chemical reactions..... _____
- Recognize an exothermic reaction..... _____
- Understand the parameters necessary for spontaneous reactions..... _____
- Use collision theory to explain how the rate of a reaction is determined..... _____
- Use Le Chatelier's Principle to predict a shift in equilibrium..... _____
- Understand how a catalyst works..... _____

3. Acids, bases, and salts

- Know some characteristics of acid/base reactions..... _____
- Know how to classify a solution as acidic, basic, or neutral..... _____

4. Radioactivity

- Understand the meaning of half-life and use this understanding to construct a graph of activity over time..... _____
- Know why fusion is not yet a viable energy source..... _____

THANK YOU VERY MUCH FOR COMPLETING THIS SURVEY.