NOTE:	This form is included for information purposes only. Evaluators will need to complete the form on the Web.

2005–06 Local Systemic Change Professional Development Observation Protocol[1]

BACKGROUND INFORMATION

Project _____ Date of Observation _____

If you are submitting two professional development observations for this date, indicate whether this was the first or second session observed. ○ 1st ○ 2nd

Location _____

Observer _____ Approximate Duration of Observation[2]:

○ 1 hour ○ 3 hours
○ 2 hours ○ half day

Observer's Role in Project: ○ Lead Evaluator ○ Other

Subject Targeted by Session ○ Mathematics ○ Science ○ Both Mathematics and Science ○ Other

SECTION ONE: CONTEXTUAL BACKGROUND AND ACTIVITIES

In this section, please fill in the circles that best describe the session. ***For each item, be sure to fill in all responses that apply.***

I. Session Demographics

A. What is the total number of participants attending this session?

○ 1–5 ○ 6–10 ○ 11–20 ○ 21–50 ○ 51–100 ○ More than 100

B. Please describe the targeted subject(s)/grade level(s)/audience for this professional development session.

1. This session was intended to improve the teaching of: (select all that apply)
   - ○ Elementary science ○ Elementary mathematics
   - ○ Middle grades science ○ Middle grades mathematics
   - ○ High school science ○ High school mathematics

2. Participants were:
   - ○ Teacher leaders for the LSC projects
   - ○ Other (non-lead) teachers
   - ○ Administrators
   - ○ Other (Please specify.) _____

[1] Be sure you have read the "2005–06 Local Systemic Change Professional Development Observations: Guidelines for Evaluators" and have completed the "Pre-Observation Interview with Professional Development Facilitator" before observing the session.

[2] The observation recorded on this form should be no less than one hour and no more than half a day.

C. Please describe the major presenters/facilitators[3] for this particular one-hour to half-day professional development session.

1. Indicate the number of presenters/facilitators in each gender and race/ethnicity category.

	African-American (not Hispanic-origin)	American Indian or Alaskan Native	Asian or Pacific Islander	Hispanic	White (not Hispanic origin)	Other
Male						
Female						

2. Indicate the number of presenters/facilitators for this particular session with each affiliation.

Regular Full-Time or Part-Time Classroom Teachers	Teachers on Special Assignment[4]	District Mathematics/ Science Supervisor	Other District Personnel	University Mathematics/ Science Faculty	University Mathematics/ Science Education Faculty	Business Industry Mathematicians/ Scientists	Other Non-District Personnel

II. Session Context

In a few sentences, describe the session you observed. Include: (a) whether the observation covered a partial or complete session, (b) whether there were multiple break-out sessions, and (c) where this session fits in the project's sequence of professional development for those in attendance.

III. Session Focus

A. Indicate the *primary intended purpose(s)* of this professional development session based on the information provided by the project staff or session organizer/facilitator.

- O 1. Increasing mathematics/science content knowledge of participants. (*Be sure to complete Category III: Mathematics/Science Content and Category VII.A: Likely Impact on Participants' Capacity to Provide High-Quality Mathematics/Science Education, in Section Two of the protocol.*)
- O 2. *Explicit* attention to classroom pedagogy/designated instructional materials. (*Be sure to complete Category IV: Exploring Pedagogy/Instructional Materials and Category VII.A: Likely Impact on Participants' Capacity to Provide High-Quality Mathematics/Science Education, in Section Two of the protocol.*)
  - O a. Creating a vision of effective mathematics/science instruction
  - O b. Understanding student thinking/learning about mathematics/science content
  - O c. Learning how to use specific instructional materials in the classroom
  - O d. Learning how to use technology in the classroom.
  - O e. Learning pedagogical/classroom management strategies
  - O f. Considering issues of access, equity, and diversity
  - O g. Designing or scoring student assessments
  - O h. Considering issues of scope and sequence (e.g., K-12 curricular frameworks)
- O 3. *Explicit* attention to strategies/issues/roles of teacher leaders, principals, or others in leadership positions. (*Be sure to complete Category V: Leadership Content and Category VII.B: Likely Impact on Participants' Leadership Capacity, in Section Two of the protocol.*)
- O 4. Other major purposes:
  - O a. Orientation to the project
  - O b. Assessing participants' knowledge/skills
  - O c. Building professional networks among educators
  - O d. Promoting/exploring reflective practice
  - O e. Developing the capacity of participants to use technology
  - O f. Involving administrators and/or other school/district personnel in the reform process

[3] In some instances this may not be appropriate, e.g., a session in which a group of teachers meets after school to discuss their action research projects may have no presenters or facilitators. In these instances, please leave the presenters/facilitators cells blank.

[4] Defined as teachers released full-time from classroom responsibilities to work on assignments such as the LSC project.

B. Indicate the *major*[5] *mathematics/science content area(s)* addressed in this professional development session, whether increasing content knowledge was a stated purpose or the mathematics/science content was simply a vehicle for achieving other purposes.

- ○ 1. Numeration and number theory
- ○ 2. Computation
- ○ 3. Estimation
- ○ 4. Measurement
- ○ 5. Patterns and relationships
- ○ 6. Pre-algebra
- ○ 7. Algebra
- ○ 8. Geometry and spatial sense
- ○ 9. Functions (including trigonometric functions) and pre-calculus concepts
- ○ 10. Data collection and analysis
- ○ 11. Probability
- ○ 12. Statistics (e.g., hypothesis tests, curve-fitting, and regression)
- ○ 13. Topics from discrete mathematics (e.g., combinatorics, graph theory, recursion)
- ○ 14. Mathematical structures (e.g., vector spaces, groups, rings, fields)
- ○ 15. Calculus
- ○ 16. Life Science (Please specify.) _____
- ○ 17. Physical science (Please specify.) _____
- ○ 18. Earth/space sciences
  - ○ a. Astronomy
  - ○ b. Oceanography
  - ○ c. Geology
  - ○ d. Meteorology
  - ○ e. Environmental science
- ○ 19. Engineering and design principles
- ○ 20. History of mathematics/science
- ○ 21. Mathematics/science as a way of knowing (e.g., inquiry, problem solving)

☐ **Mathematics/science concepts were not included as either an explicit focus or a vehicle for achieving other professional development purposes**

IV. Professional Development Activities

A. Were any of the instructional materials intended for classroom use as part of the LSC (e.g., FOSS; Insights; STC; SEPUP; Investigations in Number, Data, and Space; Connected Math; IMP; Core Plus) a focus of the professional development session?

- ○ No
- ○ Yes Please specify. _____

B. Indicate the *major*[5] *activities* of participants in this session. When choosing an "umbrella" category, be sure to indicate subcategories that apply as well. For example, if you mark "formal presentations," indicate by whom.

- ○ 1. Listened to a formal presentation by:
  - ○ a. Session presenter/facilitator
  - ○ b. Participant(s)
- ○ 2. Engaged in discussions/seminars/reporting out structured as:
  - ○ a. Entire group led by presenter/facilitator
  - ○ b. Entire group led by participant(s)
  - ○ c. Subsets of the group
- ○ 3. Engaged in problem solving/investigation focusing on disciplinary content, pedagogy, and/or reform issues
- ○ 4. Read about disciplinary content, pedagogy, or reform issues
- ○ 5. Wrote about disciplinary content, pedagogy, or reform issues

[5] "Major" means was used or addressed for a substantial portion of the session; if you were describing the session to someone, this feature would help characterize it.

C. Indicate the major professional development approaches used in this session.[6]

- ○ Workshop/institute/course/seminar
- ○ Receiving formal professional development via technology
- ○ Study groups/"kit clubs"/discussion groups/school-based meetings
- ○ Coaching/mentoring
- ○ Other: _____

D. Comments

Please provide any additional information you consider necessary to capture the activities or context of this professional development session. Include comments on any feature of the session that is so salient that you need to get it "on the table" right away to help explain your ratings.

SECTION TWO: RATINGS

In Section One of this form, you documented what occurred in the session. In this section, you are asked to use that information, as well as any other pertinent observations, to rate each of a number of key indicators in six different categories, from 1 (not at all) to 5 (to a great extent).

Note that any one session is not likely to provide evidence for every single indicator; use 6, "Don't know" when there is not enough evidence for you to make a judgment. Use 7, "N/A" (Not Applicable) when you consider the indicator inappropriate given the purpose and context of the session. For example, a session that focuses on engaging teachers in mathematics/science inquiry may choose not to address classroom applications. In that case, key indicator #8 under Category I (Design), "The design of the session provided opportunities for teachers to consider classroom applications of resources, strategies, and techniques," would be rated "N/A," rather than "not at all."

Similarly, there may be entire rating categories that are not applicable to a particular session. For example, categories III, IV, and V (Content) and Overall Ratings VIIA (Likely Impact on Participants' Capacity to Provide High Quality Mathematics/Science Education) and VIIB (Likely Impact on Participants' Leadership Capacity) each have a box to check when the entire rating category is judged to be inappropriate for the session[7]. Categories I (Design), II (Implementation), and VI (Culture of the Professional Development Session) are ones in which specific indicators may be "not applicable," but the overall category should routinely be rated for any observation.

Note that you may list any additional indicators you consider important in capturing the essence of this session and rate these as well.

Use your "Ratings of Key Indicators" (Part A) to inform your "Synthesis Ratings" (Part B). It is important to indicate in "Supporting Evidence for Synthesis Ratings" (Part C) what factors were most influential in determining your synthesis ratings and to give specific examples or quotes to illustrate those factors. Section Two concludes with ratings of the likely impact of professional development, and a capsule description of the session.

[6] Observers should refer to the Annotated Guide to the Professional Development Observation Protocol for descriptions of each of these professional development approaches.

[7] In most cases, the categories you rate will be consistent with the purposes marked in Section One. Part III.A.1 through 3.

I. Design

A. Ratings of Key Indicators

		Not at all				To a great extent	Don't know	N/A
1.	The design of the session incorporated tasks, roles, and interactions consistent with a spirit of investigation.	1	2	3	4	5	6	7
2.	The instructional strategies and activities used in this session reflected attention to participants' experience, preparedness, and/or learning styles.	1	2	3	4	5	6	7
3.	The session effectively built on participants' knowledge of content, teaching, learning, and/or the reform process.	1	2	3	4	5	6	7
4.	The strategies in this session were appropriate for accomplishing the purposes of the LSC professional development.	1	2	3	4	5	6	7
5.	The design of the session reflected careful planning and organization.	1	2	3	4	5	6	7
6.	The design of the session included "framing" the activity to help participants understand the purpose of the session and where it fits into the larger professional development picture.	1	2	3	4	5	6	7
7.	The design of the session encouraged a collaborative approach to learning.	1	2	3	4	5	6	7
8.	The design of the session provided opportunities for teachers to consider classroom applications of resources, strategies, and techniques.	1	2	3	4	5	6	7
9.	Adequate time and structure were provided for "sense-making," including reflection about concepts, strategies, issues, etc.	1	2	3	4	5	6	7
10.	Adequate time and structure were provided for participants to share experiences and insights.	1	2	3	4	5	6	7
11.	Adequate time and structure were provided for wrap-up.	1	2	3	4	5	6	7
12.	_____	1	2	3	4	5		

B. Synthesis Rating

1	2	3	4	5
Design of the session not at all reflective of best practice for professional development.				Design of the session extremely reflective of best practice for professional development.

C. Supporting Evidence for Synthesis Rating

II. Implementation

A. Ratings of Key Indicators

	Not at all				To a great extent	Don't know	N/A
1. Formal presentation(s) included in the session were carried out effectively.	1	2	3	4	5	6	7
2. The facilitator(s)' contributions during the course of the session enhanced the quality of the session.	1	2	3	4	5	6	7
3. The facilitator(s) effectively modeled questioning strategies that are likely to enhance the development of conceptual understanding (e.g., emphasis on higher-order questions, appropriate use of "wait time," identifying prior conceptions and misconceptions.)	1	2	3	4	5	6	7
4. The facilitator(s)' background, experience, and/or expertise enhanced the quality of the session.	1	2	3	4	5	6	7
5. The facilitator(s)' management style enhanced the quality of the session.	1	2	3	4	5	6	7
6. The pace of the session was appropriate for the purposes of the professional development and the needs of adult learners.	1	2	3	4	5	6	7
7. The session modeled effective assessment strategies.	1	2	3	4	5	6	7
8. _____	1	2	3	4	5		

B. Synthesis Rating

1	2	3	4	5
Implementation of the session not at all reflective of best practice for professional development.				Implementation of the session extremely reflective of best practice for professional development

C. Supporting Evidence for Synthesis Rating

III. Mathematics/Science Content

Complete this category if: a) increasing mathematics/science content knowledge was a key purpose of the session; b) mathematics/science content was a vehicle for accomplishing other professional development purposes; or c) inadequate coverage in this area acted as a barrier to accomplishing other stated purposes of the session. If none of these apply, check here ☐ and skip to category IV.

A. Ratings of Key Indicators

	Not at all				To a great extent	Don't know	N/A
1. Mathematics/science content was appropriate for the purposes of the professional development session and the backgrounds of the participants.	1	2	3	4	5	6	7
2. Mathematics/science content was sound and appropriately presented/explored.	1	2	3	4	5	6	7
3. Participants were intellectually engaged with important ideas relevant to the focus of the session.	1	2	3	4	5	6	7
4. Facilitator(s) displayed an understanding of mathematics/science concepts (e.g., in their dialogue with participants).	1	2	3	4	5	6	7
5. Mathematics/science was portrayed as a dynamic body of knowledge continually enriched by conjecture, investigation, analysis, and/or proof/justification.	1	2	3	4	5	6	7
6. Depth and breadth of attention to mathematics/science content was appropriate for the purposes of the session and participants' needs.	1	2	3	4	5	6	7
7. Elements of mathematical/scientific abstraction (e.g., symbolic representations, theory building) were included when it was important to do so.	1	2	3	4	5	6	7
8. Appropriate connections were made to other areas of mathematics/ science, to other disciplines, and/or to real-world contexts.	1	2	3	4	5	6	7
9. Extent of "sense-making" of mathematics/science content was appropriate for the purposes of the session and the needs of adult learners.	1	2	3	4	5	6	7
10. _____	1	2	3	4	5		

B. Synthesis Rating

1	2	3	4	5
Mathematics/science content of session not at all reflective of current standards for mathematics/science education				Mathematics/science content of session extremely reflective of current standards for mathematics/science education

C. Supporting Evidence for Synthesis Rating

IV. Exploring Pedagogy/Instructional Materials

Complete this category if: a) exploring classroom practice/instructional materials was a key purpose of the session; or b) lack of/inadequate coverage in this area acted as a barrier to accomplishing other stated purposes of the session. If neither of these apply, check here ☐ and skip to category V.

A. Ratings of Key Indicators

	Not at all				To a great extent	Don't know	N/A
1. Depth and breadth of attention to student thinking/learning were appropriate for the purposes of the session and participants' needs.	1	2	3	4	5	6	7
2. Depth and breadth of attention to classroom strategies were appropriate for the purposes of the session and participants' needs.	1	2	3	4	5	6	7
3. Depth and breadth of attention to instructional materials intended for classroom use were appropriate for the purposes of the session and participants' needs.	1	2	3	4	5	6	7
4. Facilitator(s) displayed an understanding of pedagogical concepts (e.g., in their dialogue with participants).	1	2	3	4	5	6	7
5. Participants were intellectually engaged with important ideas relevant to classroom practice.	1	2	3	4	5	6	7
6. Extent of "sense-making" about classroom practice was appropriate for the purposes of the session and the needs of adult learners.	1	2	3	4	5	6	7
7. _____	1	2	3	4	5		

B. Synthesis Rating

1	2	3	4	5
Pedagogical content of session not at all reflective of current standards for mathematics/science education				Pedagogical content of session extremely reflective of current standards for mathematics/science education

C. Supporting Evidence for Synthesis Rating

V. Leadership Content

Complete this category only if exploring strategies/issues/roles of teacher leaders, principals, or others in leadership positions was a key purpose of the session. If not, check here ☐ and skip to category VI.

A. Ratings of Key Indicators

	Not at all				To a great extent	Don't know	N/A
1. Information on principles of effective staff development was sound and appropriately presented/explored.	1	2	3	4	5	6	7
2. Information on strategies for mentoring/coaching peers was sound and appropriately presented/explored.	1	2	3	4	5	6	7
3. Information on how to be a reform advocate at the school/district level was sound and appropriately presented/explored.	1	2	3	4	5	6	7
4. Facilitator(s) displayed an understanding of leadership concepts (e.g., in their dialogue with participants).	1	2	3	4	5	6	7
5. Participants were intellectually engaged with important ideas relevant to the focus of the session.	1	2	3	4	5	6	7
6. Participants were given adequate and appropriate opportunity to consider how the content of the session applies to their particular leadership roles.	1	2	3	4	5	6	7
7. _____	1	2	3	4	5		

B. Synthesis Rating

1	2	3	4	5
Leadership content not at all appropriate for preparing participants to be school/district leaders of mathematics/science education				Leadership content highly appropriate for preparing participants to be school/district leaders of mathematics/science education

C. Supporting Evidence for Synthesis Rating

VI. Culture of the Professional Development Session

A1. Ratings of Key Indicators

	Not at all				To a great extent	Don't know	N/A
1. Active participation of all was encouraged and valued.	1	2	3	4	5	6	7
2. There was a climate of respect for participants' experiences, ideas, and contributions.	1	2	3	4	5	6	7
3. Interactions reflected collegial working relationships among participants.	1	2	3	4	5	6	7
4. Interactions reflected collaborative working relationships between facilitator(s) and participants.	1	2	3	4	5	6	7
5. Participants were encouraged to generate ideas, questions, conjectures, and propositions.	1	2	3	4	5	6	7
6. Participants demonstrated a willingness to share ideas and take intellectual risks.	1	2	3	4	5	6	7
7. Intellectual rigor, constructive criticism, and the challenging of ideas were evident.	1	2	3	4	5	6	7

A2. Respect for Diversity

Based on the culture of a professional development session, observers are generally able to make inferences about the extent to which there is an appreciation of diversity among participants (e.g., their gender, race/ethnicity, and/or cultural background). While direct evidence that reflects particular sensitivity or insensitivity toward diversity is not often observed, we would like you to document any examples you do see. If any examples were observed, please check here ☐ and describe below:

B. Synthesis Rating

1	2	3	4	5
Culture of the session interfered with engagement of participants as members of a professional learning community				Culture of the session facilitated engagement of participants as members of a professional learning community

C. Supporting Evidence for Synthesis Rating

VII. Overall Ratings of the Session

While the impact of a single professional development session may well be limited in scope, it is important to judge whether the session is likely to help move participants in the desired direction. For ratings in Sections A and B below, consider all available information (i.e., your previous ratings of design, implementation, content, and culture; related interviews; and your knowledge of the overall professional development program) as you assess the likely impact of this session. Feel free to elaborate on ratings with comments in the space provided.

A. Likely Impact on Participants' Capacity to Provide High Quality Mathematics/Science Education

Consider the likely impact of this session on the participants' capacity to provide high quality mathematics/science education. Select the response that best describes your overall assessment of the *likely effect* of this session in each of the following areas.

☐ Not applicable (The session did not focus on building capacity for classroom instruction.)

	Negative effect		Mixed or Neutral effect		Positive effect	Don't know	N/A
1. Participants' ability to identify and understand important ideas of mathematics/science.	○	○	○	○	○	○	○
2. Participants' understanding of mathematics/science as a dynamic body of knowledge generated and enriched by investigation.	○	○	○	○	○	○	○
3. Participants' understanding of how students learn.	○	○	○	○	○	○	○
4. Participants' ability to plan/provide high quality mathematics/ science classroom instruction.	○	○	○	○	○	○	○
5. Participants' ability to use the designated instructional materials to develop students' conceptual understanding.	○	○	○	○	○	○	○
6. Participants' self-confidence as mathematics/science instructors.	○	○	○	○	○	○	○
7. Professional networking among participants with regard to mathematics/science instruction.	○	○	○	○	○	○	○

Comments (optional):

B. Likely Impact on Participants' Leadership Capacity

If the session included any teacher leaders, principals, or others in leadership positions, consider the likely impact of this session on their leadership capacity. Select the response that best describes your overall assessment of the *likely effect* of this session in each of the following areas. Please note that even if an element was not addressed explicitly, it might have a negative or positive effect on leadership development, depending on whether it was modeled well or poorly.

☐ Not applicable (The session did not include teacher leaders, principals, or others in leadership positions.)

	Negative effect		Mixed or Neutral effect		Positive effect	Don't know	N/A
1. Leaders' knowledge and understanding of mathematics/science.	○	○	○	○	○	○	○
2. Leaders' knowledge and understanding of effective classroom practice.	○	○	○	○	○	○	○
3. Leaders' ability to convey to others a vision of effective mathematics/science classrooms.	○	○	○	○	○	○	○
4. Leaders' understanding of teachers' prior knowledge and areas where teachers have difficulty.	○	○	○	○	○	○	○
5. Leaders' understanding of adult learners.	○	○	○	○	○	○	○
6. Leaders' understanding of the reform process.	○	○	○	○	○	○	○
7. Leaders' understanding of important strategies for reform of mathematics/science education.	○	○	○	○	○	○	○
8. Leaders' ability to plan/implement exemplary professional development.	○	○	○	○	○	○	○
9. Leaders' confidence in serving in leadership roles.	○	○	○	○	○	○	○
10. Professional networking among leaders with regard to leadership issues.	○	○	○	○	○	○	○

Comments (optional):

C. Capsule Description of the Quality of the Professional Development Session

In this final rating of the session, consider all available information about the session, its context and purpose, and your own judgment of the relative importance of the ratings you have made. Select the capsule description that best characterizes the session you observed. Keep in mind that this rating is *not* intended to be an average of all the previous ratings, but should encapsulate your overall assessment of the quality and likely impact of the session. Please provide a brief rationale for your final capsule description of the session in the space provided.

- ○ **Level 1: Ineffective Professional Development**
  There is little or no evidence of participant thinking or engagement with important ideas of mathematics/science education. Session is *highly unlikely* to enhance the capacity of participants to provide high quality mathematics/science education or to be effective leaders of mathematics/science education in the district(s). Professional development appears to be either (select one below):
  - ○ **Passive "Learning"**
    Session is pedantic and uninspiring. Participants are passive recipients of information; material is presented in a way that is inaccessible to or inappropriate for many of the participants.
  - ○ **Activity for Activity's Sake**
    Participants are involved in hands-on activities or other individual or group work, but it appears to be activity for activity's sake. Session lacks a clear sense of purpose and/or a clear link to the conceptual development of participants.

- ○ **Level 2: Elements of Effective Professional Development**
  Session contains some elements of effective practice in professional development, but there are *serious problems* in the design, content, and/or implementation given the purposes of the session. For example, the content is presented in a way that would reinforce misconceptions or the pace is clearly too rapid for meaningful participant engagement. Overall, the session is *very limited* in its likelihood to enhance the capacity of most participants to provide high quality mathematics/science education or to be effective leaders of mathematics/science education in the district(s).

- ○ **Level 3: Beginning Stages of Effective Professional Development** (Select one below.)
  ○ Low 3 ○ Solid 3 ○ High 3
  Professional development is purposeful and at times effective, but there are *weaknesses*, ranging from substantial to fairly minor, in the design, content, or implementation of the session. For example, participants' expertise is not well-utilized; or participants are not given sufficient opportunity to reflect on what they are learning. Overall, the session is *somewhat limited* in its likelihood to enhance the capacity of participants to provide high quality mathematics/science education or to be effective leaders of mathematics/science education in the district(s).

- ○ **Level 4: Accomplished, Effective Professional Development**
  Facilitation is skillful and participants are engaged in purposeful work (e.g., investigations, discussions, presentations, reading) designed to deepen their understanding of important mathematics/science concepts; enhance their pedagogical skills and knowledge; increase their ability to use the designated instructional materials; or to enhance their leadership skills. The facilitator(s) implement the professional development session well and participants' contributions are valued, but adaptation of content or format in response to participants' needs and interests may be somewhat limited. The session is *quite likely* to enhance the capacity of most participants to provide high quality mathematics/science education or to be effective leaders of mathematics/science education in the district(s).

- ○ **Level 5: Exemplary Professional Development**
  Facilitation is skillful, and participants are highly engaged in purposeful work (e.g., investigations, discussions, presentations, reading) designed to deepen their understanding of important mathematics/science concepts; enhance their pedagogical skills and knowledge; increase their ability to use the designated instructional materials; or to enhance their leadership skills. The session is artfully implemented, with flexibility and responsiveness to participant needs/interests. The session is *highly likely* to enhance the capacity of participants to provide high quality mathematics/science education or to be effective leaders of mathematics/science education in the district(s).

Please provide your rationale for the capsule rating: