

Promoting Science among English Language Learners (P-SELL)

University of Miami – School of Education

Teacher Questionnaire

School: _____ Date: _____

Name: _____

We are delighted to work with you on the P-SELL Project. We would like to know your beliefs and experiences teaching science with your students. Thank you for your cooperation.

I. Professional Development

1. During the past twelve months, how often, and for how many total hours, have you participated in workshops or in-service training related to **science or science education**, aside from the P-SELL activities?

- a. How often? Never Once Twice 3-4 Times More than 4 times
- b. How many hours? N/A 1-6 hours 7-15 hours 16-35 hours More than 35 hours

2. During the past twelve months, how often, and for how many total hours, have you participated in workshops or in-service training related to **student diversity**, aside from the P-SELL activities (e.g., ESOL, Exceptional Student Education, Haitian culture, Haitian Creole, African-American culture, etc.)?

- a. How often? Never Once Twice 3-4 Times More than 4 times
- b. How many hours? N/A 1-6 hours 7-15 hours 16-35 hours More than 35 hours

3. Please indicate the extent to which you believe the following occurs in your school:

		<i>Not at all</i>	<i>A little</i>	<i>Some</i>	<i>To a great extent</i>
In my school we assign students to <u>different classrooms</u> based on:					
a.	Retention status	1	2	3	4
b.	Reading performance	1	2	3	4
c.	Math performance	1	2	3	4
d.	ESE status	1	2	3	4
e.	ESOL level	1	2	3	4

II. School Community

4. We would like to know how you feel about your school. Please indicate how strongly you agree or disagree with each statement. Circle one for each statement.

		<i>Strongly disagree</i>	<i>Somewhat disagree</i>	<i>Somewhat agree</i>	<i>Strongly agree</i>
In my school there is widespread agreement about what should be taught in the following subjects in 3rd, 4th, and 5th grades:					
a.	Reading	1	2	3	4
b.	Writing	1	2	3	4
c.	Mathematics	1	2	3	4
d.	Science	1	2	3	4
e.	Social studies	1	2	3	4

To be filled out by researchers: Teacher ID _____ School ID _____

4. (Cont'd) We would like to know how you feel about your school. Please indicate how strongly you agree or disagree with each statement. Circle one for each statement.

		<i>Strongly disagree</i>	<i>Somewhat disagree</i>	<i>Somewhat agree</i>	<i>Strongly agree</i>
f.	The principal at this school is an effective manager who makes the school run smoothly	1	2	3	4
g.	It's OK in this school to discuss feelings, worries, and frustrations with the principal	1	2	3	4
h.	Teachers design instructional programs together	1	2	3	4
i.	Most of my colleagues share my beliefs and values about what the central mission of the school should be	1	2	3	4
j.	This school really works at developing students' social skills	1	2	3	4
k.	The principal places the needs of children ahead of his/her personal and political interests	1	2	3	4
l.	Teachers respect other teachers who take the lead in school improvement efforts	1	2	3	4
m.	There is a great deal of cooperative effort among the staff	1	2	3	4
n.	Teachers at this school make a conscious effort to coordinate their teaching with instruction at other grade levels	1	2	3	4
o.	When making important decisions, the school always focuses on what's best for students learning	1	2	3	4
p.	The principal has confidence in the expertise of the teachers	1	2	3	4
q.	Teachers at this school respect those colleagues who are expert at their craft	1	2	3	4
r.	The principal, teachers, and staff collaborate to make this school run effectively	1	2	3	4
s.	The school sets high standards for academic performance	1	2	3	4
t.	Most teachers in this school are cordial	1	2	3	4
u.	The school day is organized to maximize instructional time	1	2	3	4

5. We would like to know the extent to which you feel others working in your school respect you. Circle one response for each question.

		<i>Not at all</i>	<i>A little</i>	<i>Some</i>	<i>To a great extent</i>
a.	To what extent do you feel respected by your principal?	1	2	3	4
b.	To what extent do you feel respected by other teachers?	1	2	3	4

To be filled out by researchers: Teacher ID _____ School ID _____

6. We would like to know how you feel about the other teachers in your school. Circle one response for each question.

		<i>None</i>	<i>Some</i>	<i>About half</i>	<i>Most</i>	<i>Nearly all</i>
a.	How many teachers in this school feel responsible when students in this school fail?	1	2	3	4	5
b.	How many teachers in this school help maintain discipline in the entire school, not just their classroom?	1	2	3	4	5
c.	How many teachers in this school really care about each other?	1	2	3	4	5
d.	How many teachers in this school set high standards for themselves?	1	2	3	4	5
e.	How many teachers in this school feel responsible that all students learn?	1	2	3	4	5

III. Science Coverage and Knowledge of Science Topics

- 7a. In a typical week how many times do you teach science? 0 - 1 time 2 - 3 times 4 - 5 times More than 5 times
- 7b. In a typical week, how much total time do you spend teaching science? Less than 1 hour 1 - 2.5 hours 2.5 - 5 hours More than 5 hours

8. Please indicate how knowledgeable you feel about teaching each of the following science topics at your grade level.

	<i>Not knowledgeable</i>	<i>Somewhat knowledgeable</i>	<i>Knowledgeable</i>	<i>Very Knowledgeable</i>
a. Nature of Matter	1	2	3	4
b. Energy	1	2	3	4
c. Force and Motion	1	2	3	4
d. Processes that Shape the Earth (Earth Science)	1	2	3	4
e. Earth and Space	1	2	3	4
f. Processes of Life	1	2	3	4
g. Environment (Environmental Science)	1	2	3	4
h. Nature of Science	1	2	3	4

IV. Science Teaching

9. We would like to know how you feel about **teaching science in your school**. Please indicate how strongly you agree or disagree by circling one response for each statement.

	<i>Strongly disagree</i>	<i>Somewhat disagree</i>	<i>Somewhat agree</i>	<i>Strongly agree</i>
a. The principal actively supports finding time for science instruction	1	2	3	4
b. Most teachers in this school agree about how to teach science	1	2	3	4
c. The principal allocates enough funding for science supplies	1	2	3	4
d. When I have questions about teaching science, I can get good advice from other teachers in this school	1	2	3	4
e. The principal clearly communicates the importance of teaching science	1	2	3	4
f. I can rely on other teachers in this school to help me try out new teaching techniques in science	1	2	3	4
g. The principal encourages faculty to do planning for science instruction together	1	2	3	4
h. There is a lot of disagreement among teachers in this school about how to teach science	1	2	3	4

10. During the last month, how often did **YOU** do the following with other teachers in your school **for at least 15 minutes**? Please circle one response for each statement.

	<i>Never</i>	<i>1 time</i>	<i>2-3 times</i>	<i>4-8 times</i>	<i>More than 8 times</i>
a. Share teaching materials and activities for science	0	1	2	3	4
b. Discuss inclusion of girls in teaching science	0	1	2	3	4
c. Share stories about teaching experiences in science	0	1	2	3	4
d. Discuss inclusion of ESE students in teaching science	0	1	2	3	4
e. Analyze a specific student's work in science	0	1	2	3	4
f. Work together to develop the goals or objectives for science instruction	0	1	2	3	4
g. Discuss inclusion of ESOL students in teaching science	0	1	2	3	4
h. Share assessment tasks that reveal how students understand science	0	1	2	3	4
i. Discuss inclusion of culturally diverse students in teaching science	0	1	2	3	4

V. Teacher Practices and Beliefs about the Teaching of Science

11. Does your assignment include teaching science? No Yes

IF YOU ANSWERED NO TO QUESTION 11, PLEASE SKIP TO QUESTION 15 ON PAGE 7.

During the last month, how often did **YOU** do the following **in your science lessons**?

	<i>Never or almost never</i>	<i>Some lessons</i>	<i>Most lessons</i>	<i>Every lesson</i>
a. Lecture to explain science concepts	1	2	3	4
b. Use science vocabulary in ESOL students' home language	1	2	3	4
c. Revise science materials in English to make them accessible to ESOL students	1	2	3	4
d. Conduct an experiment and have students watch rather than do it	1	2	3	4
e. Allow ESOL students to discuss science using their home language	1	2	3	4
f. Use students' mistakes to generate class discussion	1	2	3	4
g. End an experiment early (for reasons such as classroom management or time running out)	1	2	3	4
h. Allow ESOL students to write about science ideas or experiments in their home language	1	2	3	4
i. Reduce difficult language to key science vocabulary in English with ESOL students	1	2	3	4
j. Encourage small groups of bilingual and ESOL students to use their home language in science class	1	2	3	4
k. Strictly follow district guidelines for pacing of benchmarks	1	2	3	4
l. Talk with an ESOL student one-on-one in English to assess his or her communication of science ideas	1	2	3	4
m. Present science facts quickly and efficiently	1	2	3	4
n. Purposefully create small groups of English proficient and ESOL students to work together in science class	1	2	3	4
o. Use worksheets to reinforce basic skills	1	2	3	4

12. During the last month, how often did you **ASK STUDENTS** to do the following **in your science lessons**?

	<i>Never or almost never</i>	<i>Some lessons</i>	<i>Most lessons</i>	<i>Every lesson</i>
a. Explain the reasoning behind an idea	1	2	3	4
b. Apply science concepts to explain natural events or real world situations	1	2	3	4
c. Use science process skills (e.g., hypothesize, organize, infer, analyze, evaluate, describe patterns, make models or simulations)	1	2	3	4
d. Talk about things they do at home that are similar to what we do in science class (e.g., measuring, boiling water, freezing water)	1	2	3	4
e. Use basic measurement tools (e.g., ruler, thermometer, scale/balance, timer, graduated cylinder)	1	2	3	4
f. Use everyday, household items (e.g., plastic cups or containers, food coloring, light bulbs, batteries)	1	2	3	4

13. During the last month, how often did you **ASK STUDENTS** to do the following **in your science lessons for at least ten minutes**?

	<i>Never or almost never</i>	<i>Some lessons</i>	<i>Most lessons</i>	<i>Every lesson</i>
a. Discuss their prior knowledge or experience related to the science topic or concept	1	2	3	4
b. Analyze relationships using tables, charts, or graphs	1	2	3	4
c. Memorize science vocabulary	1	2	3	4
d. Write about what was observed and why it happened	1	2	3	4

VI. Barriers to Teaching Science

14. How much of a **barrier** is each of the following factors to your **teaching science**.

	<i>Not a barrier</i>	<i>Minor barrier</i>	<i>Moderate barrier</i>	<i>Major barrier</i>
Policies and Practices				
a. Emphasis on FCAT reading	1	2	3	4
b. Emphasis on FCAT mathematics	1	2	3	4
c. Emphasis on FCAT writing	1	2	3	4
d. 3rd grade retention	1	2	3	4
e. Shortage of science supplies	1	2	3	4
f. Too many science topics to cover	1	2	3	4
g. Science topics too difficult	1	2	3	4
h. Administrator turnover	1	2	3	4
i. Large class size	1	2	3	4
j. Lack of time to teach science	1	2	3	4

14. (Cont'd) How much of a **barrier** is each of the following factors to your **teaching science**.

		<i>Not a barrier</i>	<i>Minor barrier</i>	<i>Moderate barrier</i>	<i>Major barrier</i>
k.	Pullout programs during science	1	2	3	4
l.	Teacher turnover	1	2	3	4
m.	Low morale among teachers	1	2	3	4
Parents, Family, and Community					
n.	Lack of participation in school activities (e.g., parent-teacher conferences, returning phone calls)	1	2	3	4
o.	Parents' (or guardians') limited English proficiency	1	2	3	4
p.	Lack of supervision and support for homework	1	2	3	4
Students					
q.	Poor math skills	1	2	3	4
r.	Poor reading skills	1	2	3	4
s.	Poor writing skills	1	2	3	4
t.	Poor science skills	1	2	3	4
u.	ESE	1	2	3	4
v.	Limited English proficiency	1	2	3	4
w.	Lack of interest	1	2	3	4
x.	Disruptive behavior	1	2	3	4
y.	Tardiness and absences	1	2	3	4
z.	Health issues	1	2	3	4
aa.	Hunger or poor nutrition	1	2	3	4
ab.	Homelessness	1	2	3	4
ac.	Violence at home	1	2	3	4
ad.	Mobility	1	2	3	4

15. Teachers have different beliefs about **science teaching and learning**. Please indicate how strongly you agree or disagree with each belief. Circle one for each statement.

		<i>Strongly disagree</i>	<i>Somewhat disagree</i>	<i>Somewhat agree</i>	<i>Strongly agree</i>
a.	If students understand science, achievement test scores will follow	1	2	3	4
b.	Sometimes a science lesson should end without having resolved an argument	1	2	3	4
c.	A teacher should model the correct way to do science experiments first and then have students copy what the teacher does	1	2	3	4
d.	Before ESOL students can learn science, they should learn English	1	2	3	4
e.	Science can be best described as collections of facts	1	2	3	4

15. (Cont'd) Teachers have different beliefs about **science teaching and learning**. Please indicate how strongly you agree or disagree with each belief. Circle one for each statement.

	<i>Strongly disagree</i>	<i>Somewhat disagree</i>	<i>Somewhat agree</i>	<i>Strongly agree</i>
f. Before elementary students can understand formal science concepts, they should have informal experiences with them	1	2	3	4
g. To prepare students for FCAT science, it is often necessary to sacrifice student understanding	1	2	3	4
h. Students who are having difficulties with science experiments should have a chance to figure things out, even if they become frustrated	1	2	3	4
i. Science can support English language development for ESOL students	1	2	3	4
j. Once scientific knowledge is established, it is seldom disproved	1	2	3	4
k. Elementary students can draw on their own home and play experiences to do science before they receive formal instruction	1	2	3	4
l. If students understand science, they will do well on FCAT science	1	2	3	4
m. Students should master basic skills in reading, writing, and mathematics before doing science experiments	1	2	3	4
n. ESOL students' home language interferes with their learning science	1	2	3	4
o. Science is an evolving, changing, and self-correcting field of study	1	2	3	4
p. Students should learn science facts before learning concepts and principles	1	2	3	4
q. A teacher doing science experiments is just as effective as students doing the experiments	1	2	3	4
r. Science class is for science, not for English language instruction	1	2	3	4
s. The use of the scientific method guarantees that results will be correct	1	2	3	4
t. Students learn best when a few big ideas and their related topics are covered in depth	1	2	3	4
u. The most important reason for doing science experiments is to teach skills	1	2	3	4
v. Scientific theories must be changed in the face of new evidence	1	2	3	4
w. Students learn best when the teacher corrects their mistakes immediately	1	2	3	4

To be filled out by researchers: Teacher ID _____ School ID _____

15. (Cont'd) Teachers have different beliefs about **science teaching and learning**. Please indicate how strongly you agree or disagree with each belief. Circle one for each statement.

	<i>Strongly disagree</i>	<i>Somewhat disagree</i>	<i>Somewhat agree</i>	<i>Strongly agree</i>
x. Science experiments are not worth the time and expense for what students learn	1	2	3	4
y. Science is just another point of view	1	2	3	4

VII. Policy Implementation and Consequences

16. Please indicate the extent to which you agree or disagree with the following statements about policy implementation.

	<i>Strongly disagree</i>	<i>Somewhat disagree</i>	<i>Somewhat agree</i>	<i>Strongly agree</i>
a. Sunshine State Standards provide good guidelines	1	2	3	4
b. FCAT provides a fair measure of student mastery	1	2	3	4
c. FCAT preparation dominates instruction time	1	2	3	4
d. FCAT comes too soon in the year	1	2	3	4
e. The Florida A+ Plan provides a reasonable policy for grading schools	1	2	3	4
f. The rewards for Florida A+ Plan high performing schools are well deserved	1	2	3	4
g. The FCAT leaves little opportunity for students who have low reading abilities to succeed	1	2	3	4
h. Schools should be held accountable for student learning	1	2	3	4
i. Administering the FCAT to ESOL students whose scores will <i>not count</i> is a waste of students' time	1	2	3	4
j. FCAT provides a fair measure of students' basic skills	1	2	3	4
k. Administering the FCAT to ESOL students whose scores will <i>count</i> is unfair to students and schools	1	2	3	4
l. All 3rd graders should learn to read before being promoted to 4th grade	1	2	3	4
m. FCAT provides a fair measure of students' higher-order thinking	1	2	3	4
n. FCAT reading scores provide a fair way of deciding who should pass or fail 3rd grade	1	2	3	4
o. The sanctions for low performing schools are too harsh	1	2	3	4

To be filled out by researchers: Teacher ID _____ School ID _____

16. (Cont'd) Please indicate the extent to which you agree or disagree with the following statements about policy implementation.

	<i>Strongly disagree</i>	<i>Somewhat disagree</i>	<i>Somewhat agree</i>	<i>Strongly agree</i>
p. Students' poverty determines school grades	1	2	3	4
q. Students' wealth determines school grades	1	2	3	4

17. Please indicate the extent to which you believe that FCAT testing in your school increases or decreases the following:

	<i>Greatly decreases</i>	<i>Decreases</i>	<i>Increases</i>	<i>Greatly increases</i>
Instruction				
a. Emphasis on non-tested school subjects	1	2	3	4
b. Others telling me <i>what</i> to teach	1	2	3	4
c. Others telling me <i>how</i> to teach	1	2	3	4
d. Emphasis on tested school subjects	1	2	3	4
e. Time spent in test preparation	1	2	3	4
f. Drill and practice	1	2	3	4
Students				
g. Anxiety	1	2	3	4
h. Access to additional help	1	2	3	4
i. The likelihood that students are labeled (e.g., ESE, ESOL)	1	2	3	4
j. Misbehavior	1	2	3	4
k. Motivation	1	2	3	4
Teachers				
l. Autonomy	1	2	3	4
m. Creativity	1	2	3	4
n. Professional status	1	2	3	4
o. Stress	1	2	3	4
p. Morale	1	2	3	4
q. Turnover	1	2	3	4
r. Collaboration	1	2	3	4