

EIA Program Report for Fiscal Year 2011-12

Coversheet

EIA-Funded Program Name: Science P.L.U.S. Institute

Current Fiscal Year: 2011-12

Current EIA Appropriation: \$150,000

Name of Person Completing Survey and to whom EOC members may request additional information:

Mija Hood

Telephone Number:

864-355-8916

E-mail:

mhood@greenville.k12.sc.us

Question 1: History of the program: Please mark the appropriate response (choose one):

This program:

- was an original initiative of the Education Improvement Act of 1984
- was created or implemented as part of the Education Accountability Act of 1998
- has been operational for less than five years
- was funded last fiscal year by general or other funds
- is a new program implemented for the first time in the current fiscal year
- Other

Question 2: What SC laws, including provisos in the current year's general appropriation act, govern the implementation of this program? Please complete citations from the SC Code of Laws including, Title, Chapter, and Section numbers.

Code of Laws:

H.3700, GENERAL APPROPRIATIONS BILL, FISCAL YEAR 2011-2012; Part 1A Section 1- Department of Education, XI. EDUCATION IMPROVEMENT ACT, Section F. Partnerships; 2. Other Agencies and Entities,pg.8.

ARTICLE 3; SECTION 59-18-300. Adoption of educational standards in core academic areas.

Proviso(s): (If applicable. Please make references to the 2011-12 General Appropriation Act as ratified. www.XXXXX)

N/A

Regulation(s):

N/A

Do guidelines that have been approved by the State Board of Education, the Commission on Higher Education or other governor board exist that govern the implementation of this program?

- Yes
- No

Question 3: What are the primary objective(s) or goals of this program? Please distinguish between the long-term mission of the program and the current annual objectives of the program. (The goals or objectives should be in terms that can be quantified, evaluated, and assessed.)

The long-term goal of the Science P.L.U.S. Institute at Roper Mountain Science Center (RMSC) is to improve student academic achievement by providing professional development opportunities for SC public school educators teaching science in grades 3 through 8.

To achieve this long term mission, each year the Institute:

1. Helps the state close the achievement gap by a) placing 100% of applicants from Palmetto Priority Schools and b) selecting 45% or more of total participants from Title I schools.
2. Ensures this program serves the entire state with selection from all districts with applicants.
3. Supplies teachers with science equipment and classroom materials necessary to duplicate in their classrooms, lessons learned at the Institute.
4. Increases teachers' mastery of content and encourages their focus on instruction and subject understanding, versus just memorizing facts.
5. Offers grade-specific classes aligned with the SC Science Academic Standards and incorporate S.T.E.M. curriculum throughout courses.
6. Emphasize the use of technology in all classes by providing lessons, activities, and the equipment for teachers to take back to their schools and classrooms.

Annual objectives for the program include:

1. Manage EIA funds so that attending teachers and their students and schools receive the maximum benefit, with less than 49% being used for personnel costs.
2. Provide challenging inquiry based activities and practical ideas for teachers to use in their classrooms while incorporating cross curricula concepts.
3. Develop a network for teachers statewide while encouraging staff development opportunities within districts and schools.
4. Renew teachers' enthusiasm and builds confidence in teaching science while using technology.

Question 4: In the prior fiscal year, 2010-11, what primary program activities or processes were conducted to facilitate the program's performance in reaching the objective(s) as provided in Question 3? What, if any, change in processes or activities are planned for the current year?

Examples of program processes would be: training provided, recruiting efforts made, technical assistance services, monitoring services, etc.

Answers should be specific to the process undertaken at the state level to support the objectives of the program and should be quantifiable. Please include any professional development services provided.

IF the funds are allocated directly to school districts, please indicate any data collected at the state level to monitor how the funds are expended at the local level?

The Science P.L.U.S. Institute achieved the goals through the following program activities in the prior fiscal year 2010-2011:

1. Conducted 6 grade-specific and SC science standard-based professional development courses for teachers in grades 3-8.

Courses included: Physical Science for grades 3 and 5, Life Science for grades 4 and 6, Human Body/Health for grade 7, and Space Science for grade 8.

(Science is identified as one of the state's Critical Need Subject Areas)
2. Selected 39 teachers from Title I schools.
3. Selected all applicants from Palmetto Priority Schools.
4. Selected teachers from schools considering the number of prior participants from that school and gave priority to schools that have never before been represented.
5. Gave priority placement to teachers who have previously applied, but not attended. If an opening occurred and there were no primary (first-time) applicants, secondary applicants were considered.
6. Placed teachers from the same school into different classes to maximize the benefit to the schools and districts.
7. Cut operating costs to provide science equipment and materials for the classrooms of 95 participating teachers. This was done by maximizing RMSC staff as instructors, decreasing assistant's hours, and seeking quantity discounts. (Summer 2011 distributed over \$88,000 worth of science materials to participating teachers.)
8. The grade-specific courses were activity-intensive to give teachers necessary content as well as practical lessons and ideas. Teachers received lesson plans for the activities they completed in class along with the equipment and materials necessary to duplicate those activities.
9. The inquiry-based courses with 15 or 16 teachers per class, gave teachers time to make the displays used in lessons, and incorporated enough course content to give participants a confident background in

the subject. These elements built confidence and enthusiasm for teaching a difficult subject.

10. Instructors developed SC Science Academic Standards based courses which additionally provide cross curricula options.
11. All classes offer a balance of lecture, technology, hands-on activities, and teacher-created displays.
12. Assigned as many RMSC staff instructors as possible to save on personnel costs. (Limited to 4 positions for summer 2011.) Their time is contributed by RMSC and Greenville County Schools.
13. Recruited teacher participants for the Science P.L.U.S. Institute by:
 - a) Mailed posters and brochures to all SC public elementary and middle schools
 - a) E-mailed all school districts to post information on their web sites, along with photo(s) if had teacher attend in year prior
 - b) Made the application, course outlines, and additional information available on-line through the Roper Mountain Science Center website
 - c) Recorded interviews on ETV radio's 'Speaking of Schools' with Doug Keel
 - d) Contacted Department of Education's Communication Department about posting Science P.L.U.S. Institute information on their web site
 - e) Mailed all prior year's participants and applicant's brochures and encouraged them to pass on the information to other teachers

>>> Changes in processes or activities planned for 2011-12 are:

1. The Science P.L.U.S. Institute will begin focusing and incorporating the S.T.E.M. curriculum throughout the Institute for SC public school educators who teach science in grades 3 through 8.
2. PASS scores were reviewed and science standards with low student performance were identified and will be used in determining which Institute courses would be offered.
3. Offer 7 grade-specific and SC science standard-based professional development courses for teachers in grades 3-8. Courses included: Physical Science for grades 3 and 6, Earth Science for grade 5, Space Science for grades 4 and 8, and Human Body/Health for grade 7.
4. Teacher attendance will be increased to 111 teacher participants with the addition of the new course.
5. Supplies for participants will decrease from \$800 to \$500 per teacher to allow for the increase in courses offered, teachers selected, and PLUS instructors.

Question 5: In the prior fiscal year, 2010-11, and using the most recent data available, what were the direct products and services (outputs) delivered by this Program?

Examples of program outputs would be: number of teachers attending professional development seminars, number of and passage rates on AP exams, number of students served in the program, improvements in student achievement, retention and graduation.

The direct products and outputs delivered by the 2011 Science P.L.U.S. Institute at Roper Mountain Science Center (RMSC) were:

- 95 Participants in 6 classes encompassing grades 3-8
- 6 different courses built around South Carolina Science Academic Standards
- 89 South Carolina Schools represented, 7 of them for the first time
- 895 South Carolina schools have participated at least once since 1993
- 39 Title I School teachers participated-41% of total participants
- 51 of 87 school districts represented (counting charter schools & special schools each as 1 district)
- 6 participants from Palmetto Priority Schools
(Ridgeland Middle School, Blenheim Elementary/Middle, Dennis Intermediate, Johnson Middle, and 2 from Fairfield Elementary)
- 76 participants came in 2011 for the first time--80% of this year's participants
- 17 participants took the course for graduate credit through Furman University
- Alternates replaced 46 of the teachers selected (48% decline rate)
- Participants' teaching experience ranged from 1-36 years (12 years average)
- Lodging Provided for 48 Out-of-Town Teachers (51%)
- 12 instructional positions; 4 filled by Roper Mountain Science Center staff, 10 by Upstate educators
- 2,850(estimated) students impacted by THIS summer's Science P.L.U.S. Institute participants
- Since 1993, \$2,020,500 worth of science materials have been distributed to South Carolina public school teachers across the state.
- 1 Administrative year-round staff, logistics staff-2 (2.5 weeks in the summer only)
- Each Teacher Participant Received Items Valued at Over \$800

Question 6: What are the outcomes or results of this program?

Outcome can be both quantitative and qualitative and should address the program's objectives. Please use the most recent data available:

Examples of outcomes would be: results of surveys, student achievement results, increases in participation, reduction in achievement gaps, loans awarded, textbooks purchased, etc.

The PASS Science test scores for 2010 and 2011 were collected and compared for schools with 2010 PLUS participants. The overall change was positive with 72 out of 105 scores increasing in total percentage passing (note: several schools had more than one grade level represented).

- 21 out of 105 showed an increase in PASS Scores of greater than 10%
- 51 out of 105 showed an increase in PASS scores between 0-10%
- 33 out of 105 showed a decrease in PASS scores.

(PASS Portal. (2011, September 10-19). Retrieved from <http://ed.sc.gov/agency/ac/Data-Management-and-Analysis/PASSPortal.html>)

In reviewing the PASS scores and science standards, the areas of low student performance were identified and will be incorporated in the Institute's curriculum. PASS scores will continue to be used as an indicator for the Institute to evaluate science classroom performance of those schools that have had teachers attend.

In addition to the PASS Science scores as an evaluative tool, the teachers were given a questionnaire at the end of the Institute which focused on several different aspects of the Institute. See attached graph for quantitative data.

1. What difference will the materials make in your classroom?

Stephanie Logan, Anderson 1 wrote: No doubt about it! Now that I know the possibilities I am more likely to come up with more, creative, hands-on experiments on my own now too.

Chasity Brazell, Fairfield, wrote: (The materials) will increase my ability to teach my students and allow them to make visual and real life connections.

A teacher who participated in Life Science 4 wrote: I have become a more inquiry based teacher with more hands-on approaches to help with student experiences.

Jennifer McGinnis, York 4, wrote: The materials are wonderful. I would not be able to afford many of these things on my own. Many of the materials I didn't even know about. I can't wait to be able to give my students these *hands-on authentic learning* opportunities.

Jessica Steele, Colleton shared: I will also be able to share my resources with other teachers and classes in the district.

Lisa Hoffman, Greenville wrote: Science PLUS has changed the way I teach science. The materials gained will greatly enhance my students' learning. Science is most effectively *taught by doing NOT by reading* about the

concepts. The supplies provided will enable me to provide a quality learning experience for my 3rd graders.

A teacher who attended the Life Science course stated: being able to use science equipment makes a tremendous difference to students. As a teacher, I feel more confident that I will be better able to instruct them with hands-on instruction.

Jenny Marchbanks, Pickens stated: Wonderful activities that I can't wait to do in my classroom. The materials will make an astronomical difference.

2. Relevance of activities and subject matter to the SC Science Academic Standards for their grade:

Susan Conner, Anderson 1 stated: I can't wait to share (with other teachers). I've already been thinking of different things that will work with the other grade levels. The instructors really made science come alive for me. I no longer teach science-I am a real science teacher!

Amanda Poplin, Dorchester 2 wrote: I cannot wait to see my PASS scores after I use these concepts. I will develop strategies and not be as scared as I was before this Institute. This is a class that all teachers need to take!

A teacher who participated in Life Science 6 stated: Relevant to South Carolina Science Standards and given ideas to extend cross curriculum with ELA and Art.

Deloris Smoot, Darlington said: I feel more confident to not only teach science, but I feel like I have a format that I can establish in all areas. This will help me become a more effective teacher.

Mellie Spencer, Lee shared: Most effective class instruction I have ever had. Not only did we get explanations, but we also did everything our students would do so we were comfortable. I am much more comfortable not only in teaching science but also with taking a step further for the gifted students I teach.

A teacher who participated in the Human Body 7 course wrote: The experiences this week have made me anxious and excited about incorporating hands-on activities with each and every lesson I teach.

3. In response to instructor effectiveness:

A teacher who participated in the Physical Science 3 course wrote: Wonderful! Instructors were engaging and extremely knowledgeable. They created lessons that we could take directly to the classroom.

Allison Jacobs, Lexington 2 wrote: All I can say is WOW! They were energetic, humorous, and full of knowledge to share with so many awesome activities.

Christopher Rodriguez, Pickens, wrote: I would like to express my most sincere appreciation for the professionalism and exemplary manner in which the instructors shared their knowledge and their implementation of classroom management and modeling of the elements of highly effective learning environment.

Meg McKnight, Greenville, wrote: This has been the best professional development that I have ever been to. We were given so much information and most importantly were given SO MANY tools to teach science the way it should be taught. Peter and Tim were FABOULOUS! They have such great ideas for bringing these tough concepts into our classrooms in a way the kids will LOVE to LEARN!

Question 7: Program Evaluations

What was the date of the last external or internal evaluation of this program?

June 2011

Has an evaluation ever been conducted?

Yes

No

If an evaluation was conducted, what were the results and primary recommendations of the most recent evaluation?

The evaluation used this year incorporated yes/no style questions in addition to free response type questions. The responses to the questions were overwhelmingly positive in regards to instructors, content and materials provided by the Institute.

1. DID THIS CLASS INCREASE YOUR CONTENT KNOWLEDGE IN THE AREA STUDIED?

Results 100% = Yes

Sandy Ingebresten from Greenville said: Absolutely, as well as cleared up a few misconceptions.

Allison Jacobs from Lexington 2 said: Without a doubt? This was my biggest reason for coming so that I can be comfortable teaching concepts to students that I previously had little knowledge about. My students will now have a new found love of science.

2. AS A RESULT OF THIS WEEK'S STUDIES ARE YOU MORE CONFIDENT IN YOUR ABILITY TO TEACH SCIENCE?

Results 99% = YES

Deloris Smoot from Darlington responded: Yes! I feel more confident to not only reach physical science, but I feel like I have a format that I can establish in all areas.

Christopher Rodriquez, Pickens, wrote: I am more informed and confident that I will be able to pass on to my students the knowledge that I learned here!

3. ARE YOU WILLING TO SHARE THE ACTIVITIES, LESSONS, AND MATERIALS YOU RECEIVED WITH OTHER TEACHERS IN YOUR SCHOOL OR DISTRICT?

Results 100% = YES

Yvette Collins-Haili, Richland 1, wrote: I now have the confidence to stand before anyone and effectively demonstrate using engaging, effective strategies, lessons and activities.

An 8th grade science teacher responded: We work very closely with our departments and share materials as well as coordinate and plan all lessons, so all materials will be used by all teachers in the grade level.

4. AS A RESULT OF YOUR EXPERIENCES THIS WEEK, WILL YOU DEVELOP STRATEGIES THAT HELP YOU BE A MORE EFFECTIVE TEACHER?

Results 98.7% = YES

Tanya Craig, Union responded: In the past, I have been handed support documents and said go for it; however, I now have a broader spectrum of knowledge as well as AWESOME methods to teach the materials.

Idot-Enyin Louis, Richland 1 shared: I'm always thinking of better strategies and incorporating more ideas to better teach the curriculum.

5. WOULD YOU RECOMMEND THIS PROGRAM TO YOUR PEERS?

Results 100% = YES

Paige Whatley, Greenville wrote: I will recommend this to my peers at school. This was an amazing experience!

A teacher who participated in Space 8 wrote: I have been trying for 10 years to get back into another PLUS Institute-so YES!!!

Can you provide a URL link, electronic version, or hard copy of this evaluation to the EOC?

Yes

No

If yes, please provide URL link here.

*see email attachment

If no, why not?

Question 8:

While EIA revenues increased in 2010-11 over the prior fiscal year and no mid-year cuts were made to any EIA programs, programs and agencies continue to implement conservative budget practices.

Please describe how the program and/or organization would absorb or offset potential EIA reductions totaling 5%, and 10% in the current fiscal year, Fiscal Year 2011-12?

The appropriations in 2009 were \$250,000 for the Science P.L.U.S. Institute with a steady decline of 40% to the current appropriations of \$150,000. The Institute has handled the reductions by decreasing the number of courses offered and limiting staff costs.

To ensure fiscal responsibility, the Institute's projected budget includes a 10% hold of funds to allow for possible EIA reductions. Should there be no mid-year cuts; funds will be applied towards purchasing science equipment and materials for participants' classrooms.

Question 9:

If no additional EIA revenues were appropriated to this program in Fiscal Year 2012-13 above the current year's appropriation level, how would the objectives, activities and priorities of this program change?

Please be specific to address the impact to students, teachers or schools. Are there regulatory or statutory changes that you would recommend to the legislature that would assist this program/organization in meeting its objectives?

The main objectives of this program would remain the same:
The Science P.L.U.S. Institute at RMSC will improve student academic achievement by providing professional development opportunities for SC public school educators who teach science in grades 3 through 8.

The FY 2011-2012 P.L.U.S. budget included carryover funds from the prior year, which was applied to science equipment and classroom materials. Because of the carryover funds, the Institute was able to provide an additional course, resulting in an increase in teacher attendance.

If no additional EIA revenues are appropriated in FY 2012-2013, these measures will be taken to meet the projected budget:

1. Science P.L.U.S. would consider reducing the number of courses offered to teachers, limiting the impact on students, schools, and districts.
2. Teacher attendance could be lowered to 96-90, depending upon grant appropriation.
3. Housing for out of town teachers could be adjusted according to reduction amounts, which could affect the attendance of the teachers who drive over an hour from the Center. (Housing goal has been 50% of all participants in past years.)
4. Materials given to the teachers could be further limited. The materials by far are the most valuable resources for teachers, not only do the materials impact the participating teacher's classroom, but impact the school and district through staff development and collaborative planning.

If you want to provide supporting documents or evaluation reports, either reference a website below or email the report directly to mbarton@eoc.sc.gov.

Questions 10 and 11 Apply only to programs NOT administered by the South Carolina State Department of Education.

Question 10: Fiscal Year 2012-13

The total amount of EIA funds requested for this program for the next fiscal year will be:

The same as appropriated in the current fiscal year's appropriation

An increase over the current fiscal year's appropriation

A decrease over the current fiscal year's appropriation

If you indicated an increase or decrease in funding for the next fiscal year, what is the total amount requested for this program for the next fiscal year?

NA

If you indicated an increase or decrease, please describe the reasons for the increase or decrease. How will the increase or decrease impact the objective of the program?

Question 11: Fiscal Years 2010-11 and 2011-12

Please fill in the attached charts to reflect the budget for this program in the prior fiscal year (2010-11) and the budget for this program in the current fiscal year (2011-12).

If the program was not funded in the prior fiscal year, please fill out information for the current fiscal year only.

Funding Source	Prior FY Actual	Current FY Estimated
EIA	175,000	150,000
General Fund		
Lottery		
Fees		
Other Sources		
Grant		
Contributions, Foundation	1,000	1,000
Other (Specify)		-15,000
Carry Forward from Prior Yr	18,733	41,922.83
TOTAL	194,733.37	177,922.83

Other:

*A projected amount of the funds which may be held by Greenville County Schools for possible mid-year EIA reductions. This amount will be uploaded to the supplies and materials expenditures when released.

Expenditures	Prior FY Actual	Current FY Estimated
Personal Service	56,448.91	85,662.72
Contractual Services	11,619.41	16,250.00
Supplies and Materials	83,741.68	67,916.64
Fixed Charges		
Travel		500.00
Equipment		
Employer Contributions		
Allocations to Districts/Schools/Agencies/Entities		-15,000.00
Other: Please explain		6,593.47
Balance Remaining	41,922.83	0
TOTAL	193,733.37	177,922.83
#FTES	1	1.5

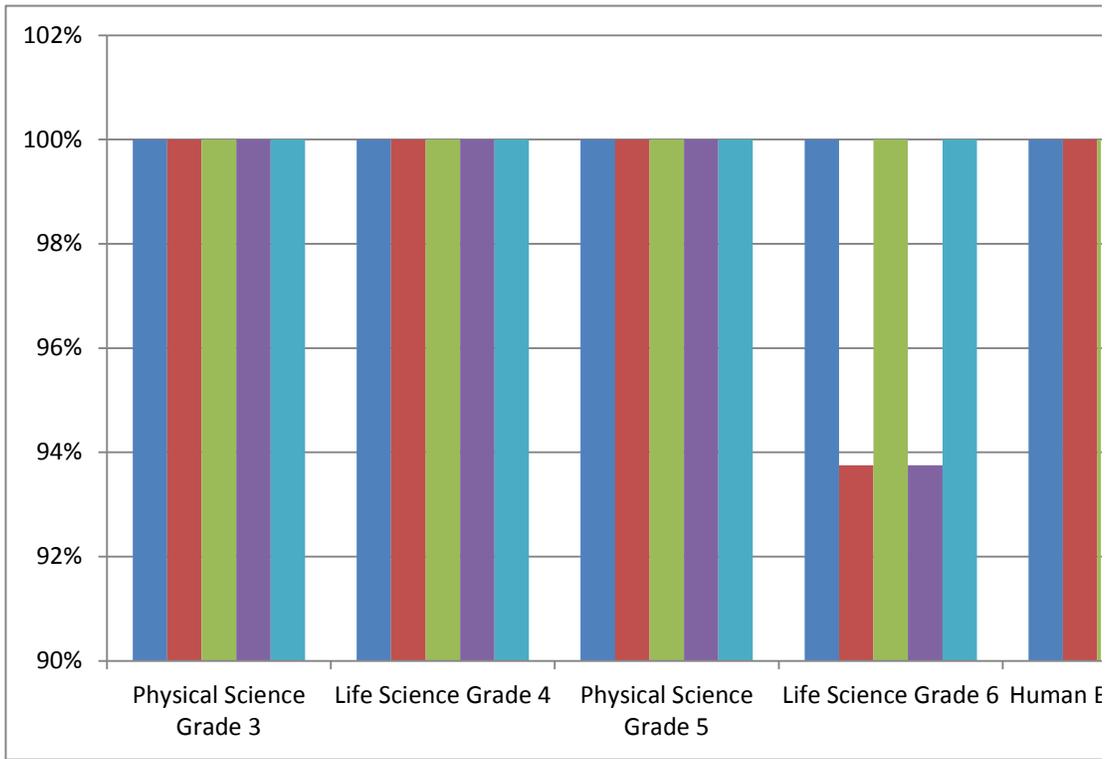
Other:

Personal Service: Payroll expense for FY 2010-2011 Institute instructors and staff was delayed and paid out in FY 2011-2012 out of carry-over amounts.

Allocations to Districts: A projected amount of the funds which may be held by Greenville County Schools for possible mid-year EIA reductions. This amount will be uploaded to the supplies and materials expenditures when released.

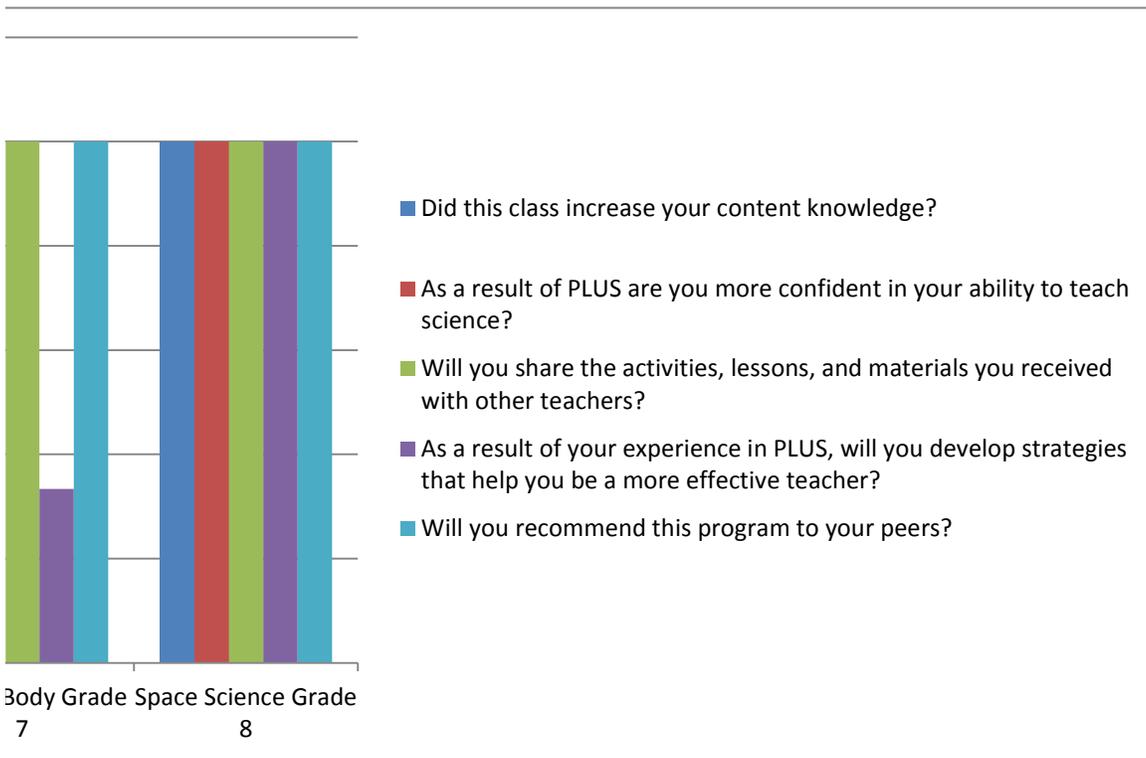
2011 End of Course I

Class	Did this class increase your content knowledge?		As a result of PLUS are you more confident in your ability to teach science?	
	Percentage	Count	Percentage	Count
Physical Science Grade 3	100%	16 / 16	100%	16 / 16
Life Science Grade 4	100%	16 / 16	100%	16 / 16
Physical Science Grade 5	100%	16 / 16	100%	16 / 16
Life Science Grade 6	100%	16 / 16	94%	14 / 15
Human Body Grade 7	100%	15 / 15	100%	16 / 16
Space Science Grade 8	100%	16 / 16	100%	16 / 16



Evaluation Results

Will you share the activities, lessons, and materials you received with other teachers?		As a result of your experience in PLUS, will you develop strategies that help you be a more effective teacher?		Will you recommend this program to your peers?	
100%	16 / 16	100%	16 / 16	100%	16 / 16
100%	16 / 16	100%	16 / 16	100%	16 / 16
100%	16 / 16	100%	16 / 16	100%	16 / 16
100%	16 / 16	94%	15 / 16	100%	16 / 16
100%	15 / 15	93%	14 / 15	100%	15 / 15
100%	16 / 16	100%	16 / 16	100%	16 / 16



Science P.L.U.S. Institute Evaluation

Class Title _____ Name (optional): _____

PLEASE USE BLACK OR BLUE INK. Use the back of the sheet for additional remarks.

Item	Comments or Suggestions for Improvement
Instructor effectiveness	
Relevance of activities and subject matter to the SC Science Academic Standards for your grade	
What difference will the materials make in your classroom?	
How did you hear about Science P.L.U.S.?	

1. **Did this class increase your content knowledge** in the area studied?

2. As a result of this week's studies are **you more confident** in your ability to teach science?

3. **Will you share** the activities, lessons, and materials you received at Science P.L.U.S. with other teachers in your school or district?

4. As a result of your experiences this week, **will you develop strategies** that help you be a more effective teacher?

5. **Will you recommend** this program to your peers?