

**U.S. Department of Education - EDCAPS  
G5-Technical Review Form (New)**

Status: Submitted

Last Updated: 08/02/2012 04:53 PM

## Technical Review Coversheet

Applicant: LEED Sacramento (U411B120043)

Reader #1: \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Summary Statement</b>		
<b>Summary Statement</b>		
1. Summary Statement	0	
<b>Sub Total</b>	<b>0</b>	
<b>Selection Criteria</b>		
<b>Quality of Project Design</b>		
1. Project Design	25	25
<b>Significance</b>		
1. Significance	25	25
<b>Quality of the Management Plan and Personnel</b>		
1. Mgmt Plan and Personnel	25	24
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	25	0
<b>Sub Total</b>	<b>100</b>	<b>74</b>
<b>Priority Questions</b>		
<b>Competitive Preference Priority 6</b>		
<b>Competitive Preference Priority 6</b>		
1. CCP 6	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 7</b>		
<b>Competitive Preference Priority 7</b>		
1. CCP 7	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 8</b>		
<b>Competitive Preference Priority 8</b>		
1. CPP 8	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 9</b>		
<b>Competitive Preference Priority 9</b>		
1. CPP 9	1	
<b>Sub Total</b>	<b>1</b>	

**Competitive Preference Priority 10**

**Competitive Preference Priority 10**

1. CPP 10

	1	1
<b>Sub Total</b>	1	1
<b>Total</b>	105	75

# Technical Review Form

Panel #2 - Validation Panel - 2: 84.411B

Reader #1: \*\*\*\*\*

Applicant: LEED Sacramento (U411B120043)

## Questions

### Summary Statement - Summary Statement

#### 1. Summary Statement (Optional):

General:

Reader's Score:

### Selection Criteria - Quality of Project Design

#### 1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are (a) aligned with the priorities the eligible applicant is seeking to meet, and (b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

(3) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start-up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

#### Strengths:

The applicant provides three very clear goals with explicit strategies that address the overall purpose of this proposal which is to develop robust STEM opportunities for high school youth. (pp.9-10). The applicant connects these goals to the quasi-experimental research design, as well, thus providing a cogent, comprehensive approach to this project. This section provides a very clear picture of what the applicant will do and outlines the strategies for how they will accomplish their goals.

This project has great potential to incorporate the proposed work into the applicant s, partners , and educational fields due to the fact the applicant will be studying a program in place in over 4000 schools across the country. This is affecting a significant number of students.

The applicant provides a very reasonable per pupil cost, \$635.36, (p.13) which includes both start-up and continuation costs. In addition, the applicant provides the scale up costs to meet all three population targets.

#### Weaknesses:

None

Reader's Score: 25

### Selection Criteria - Significance

1. The Secretary considers the significance of the project. In determining the significance of the project, the Secretary considers the following factors:

(1) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

(2) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.

#### Strengths:

This proposal represents an exceptional approach to promoting STEM education. It will provide the field with a benchmark study for a widely-used secondary-level program, Project Lead the Way (PLTW). This study will identify and provide an understanding of the benefits, if any, for this hybrid career and technical education (CTE) and STEM program. PLTW has a specific emphasis which offered access to those students who have been historically under-represented in the STEM field (p. 14).

The applicant provides an overview of current research and practice within the engineering education field. In addition, the applicant takes this further and identifies what it believes to be a major weakness in the research (i.e., lack of empirical research) and proposes a project which will add to the current knowledge base (pp. 15-18).

The applicant does quantify the potential impact of the project (students in more than 4,000 high schools across the country), offers research questions that will address the impact PLTW has on students, and proposes to complete this with particular regard to the criteria outlined under Selection Criteria B listed above.

#### Weaknesses:

None

Reader's Score: 25

### Selection Criteria - Quality of the Management Plan and Personnel

1. The Secretary considers the quality of the management plan and personnel for the proposed project. In determining the quality of the management plan and personnel for the proposed project, the Secretary considers the following factors:

(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.

(2) The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing complex projects.

(3) The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a State or regional level (as appropriate, based on the results of the proposed project) working directly, or through other partners, either during

or following the end of the grant period.

**Strengths:**

The applicant does provide a very detailed 5-year management plan which includes clearly defined responsibilities, timelines, and milestones (pp. 24-27). Key personnel appear to have the requisite relevant training and experience. The CEO brings experience from both the non-profit and public sectors, and has a background in organizational management (See CV). The Director of Educational Innovation brings experience from the current collaborative network (LEED), higher education (Tech Prep and CTE Coordinator), county office of education (Diploma Plus and A-G courses), and public education (See CV). It appears, that together, these two program administrators have the collective experience necessary to prepare them for implementing this project successfully. The applicant clearly identifies its partners from both the private and public sectors (pp. 30-31) all of whom can help bring this project to scale in a myriad of ways from the school level to the corporate level. The applicant already has a structure in place (P-20 Council) which will enable them to gain access to the necessary resources.

**Weaknesses:**

The job description for the PLTW Coordinator (pp.29-30) is rather robust and perhaps the applicant may consider bringing the person on as an FTE greater than the proposed .5 FTE.

**Reader's Score: 24**

**Selection Criteria - Quality of the Project Evaluation**

1. The Secretary considers the quality of the project evaluation. In determining the quality of the project evaluation to be conducted, the Secretary considers the following factors:

- (1) The extent to which the methods of evaluation will include a well-designed experimental study or a well-designed quasi-experimental study.
- (2) The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.
- (3) The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.
- (4) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

**Strengths:**

Section scored by another reviewer.

**Weaknesses:**

Section scored by another reviewer.

**Reader's Score: 0**

**Priority Questions**

**Competitive Preference Priority 6 - Competitive Preference Priority 6**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on

(a) improving young children's school readiness (including social, emotional, and cognitive readiness) so that children are prepared for success in core academic subjects (as defined in section 9101(11) of the ESEA);

(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and

(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

#### **Competitive Preference Priority 7 - Competitive Preference Priority 7**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12 students that

(a) address students' preparedness and expectations related to college;

(b) help students understand issues of college affordability and the financial aid and college application processes; and

(c) provide support to students from peers and knowledgeable adults.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

#### **Competitive Preference Priority 8 - Competitive Preference Priority 8**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or the linguistic and academic needs of limited English proficient students. To meet this priority, applications must provide for the implementation of particular practices, strategies, or programs that

are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

#### **Competitive Preference Priority 9 - Competitive Preference Priority 9**

- 1. We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.**

**Strengths:**

**Weaknesses:**

**Reader's Score:**

#### **Competitive Preference Priority 10 - Competitive Preference Priority 10**

- 1. We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.**

**Strengths:**

The applicant clearly identifies how the proposed curriculum, PLTW, uses high quality digital tools as well as materials (pp. 2-7) to improve student achievement. In addition, the applicant outlines a strategy to improve teacher knowledge, boot camp trainings which, in turn, will affect teacher effectiveness.

**Weaknesses:**

None

**Reader's Score:** 1

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**Status:** Submitted

**Last Updated:** 08/02/2012 04:53 PM



Status: Submitted

Last Updated: 08/04/2012 04:35 PM

## Technical Review Coversheet

Applicant: LEED Sacramento (U411B120043)

Reader #2: \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Summary Statement</b>		
<b>Summary Statement</b>		
1. Summary Statement	0	
<b>Sub Total</b>	<b>0</b>	
<b>Selection Criteria</b>		
<b>Quality of Project Design</b>		
1. Project Design	25	25
<b>Significance</b>		
1. Significance	25	24
<b>Quality of the Management Plan and Personnel</b>		
1. Mgmt Plan and Personnel	25	23
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	25	0
<b>Sub Total</b>	<b>100</b>	<b>72</b>
<b>Priority Questions</b>		
<b>Competitive Preference Priority 6</b>		
<b>Competitive Preference Priority 6</b>		
1. CCP 6	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 7</b>		
<b>Competitive Preference Priority 7</b>		
1. CCP 7	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 8</b>		
<b>Competitive Preference Priority 8</b>		
1. CPP 8	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 9</b>		
<b>Competitive Preference Priority 9</b>		
1. CPP 9	1	
<b>Sub Total</b>	<b>1</b>	

**Competitive Preference Priority 10**

**Competitive Preference Priority 10**

1. CPP 10

	1	1
<b>Sub Total</b>	1	1
<b>Total</b>	105	73

# Technical Review Form

Panel #2 - Validation Panel - 2: 84.411B

Reader #2: \*\*\*\*\*

Applicant: LEED Sacramento (U411B120043)

## Questions

### Summary Statement - Summary Statement

#### 1. Summary Statement (Optional):

##### General:

Reader's Score:

### Selection Criteria - Quality of Project Design

#### 1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are (a) aligned with the priorities the eligible applicant is seeking to meet, and (b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

(3) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start-up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

##### Strengths:

The applicant has established three goals: (1) Reaching up to 1600 students in 40 high schools with increased access to the Project Lead the Way curriculum; (2) Increasing the number of individuals from groups traditionally underrepresented in STEM and preparing them for postsecondary training and/or education in the STEM fields; and (3) Determine the impact of Project Lead the Way, discovering the extent to which the curriculum improves student achievement in math and science. The strategy is to validate the efficacy and effectiveness of PLTW in the greater Sacramento region and nationwide (p. 10). This strategy supports each of the three goals of this proposal.

LEED's capacity as a Northern California outreach hub (p. 9) and its role facilitating the Capital Region of the Project Lead the Way Network of schools, demonstrates the potential for the incorporation of the proposed project into its ongoing work. LEED is already actively engaged in ongoing work to raise funds and provide technical support for high schools and middle schools. Serving in this capacity for the past five years, LEED has grown its network of schools from five middle and high schools to now having 20 middle schools; this proposal seeks to reach 40 additional high schools (p. 11).

Beginning on page 13, the narrative describes the estimated start up and operational costs per student per

year, including indirect costs for the proposed project to reach 1,600 students. The cost per student per year is \$635.36. The applicant also estimates the cost to reach 100,000, 250,000 and 500,000 students. The cost is reasonable for the proposed project's stated objectives, design and significance and relative to costs associated with cell phone usage (p. 14) and some extracurricular activities (p. 15).

**Weaknesses:**

No weaknesses noted.

**Reader's Score: 25**

**Selection Criteria - Significance**

**1. The Secretary considers the significance of the project. In determining the significance of the project, the Secretary considers the following factors:**

**(1) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.**

**(2) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.**

**(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.**

**Strengths:**

The proposed project represents an exceptional approach to the STEM priority for this competition, in that PLTW, its curriculum and its network of schools focuses on Engineering as a conduit to promote STEM more broadly. This also ties back to Goal 3, which seeks to determine the impact of this program on math and science achievement. The PLTW curriculum promotes student engagement and application of mathematical and scientific concepts (p. 14) and is designed to serve high school students of diverse backgrounds. In addition, the California State University and the University of California State systems have approved PLTW classes as official college preparatory courses.

The applicant provided ample evidence that the proposed project reflects up-to-date knowledge from research and effective practice. The applicant cites several research and reports (e.g., Southern Region Educational Board, the University of Wisconsin, Cengage Learning) and also provides evidence of the impact of PLTW on student postsecondary outcomes such as first-year STEM coursework and GPA (p. 18-19).

**Weaknesses:**

The narrative does not make explicit what the implication (dual credit, for example) is of having the California State University and University of California State systems approval of these courses as official college preparatory courses. Clarification would strengthen the narrative in demonstrating the proposed project's exceptional approach.

**Reader's Score: 24**

**Selection Criteria - Quality of the Management Plan and Personnel**

**1. The Secretary considers the quality of the management plan and personnel for the proposed project. In**

determining the quality of the management plan and personnel for the proposed project, the Secretary considers the following factors:

(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.

(2) The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing complex projects.

(3) The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a State or regional level (as appropriate, based on the results of the proposed project) working directly, or through other partners, either during or following the end of the grant period.

**Strengths:**

The applicant presents a detailed 5-year project management plan beginning on page 24. It includes a timeline with defined responsibilities and milestones. The management plan appears to be sufficiently adequate to achieve the objectives of the proposed project on time and within budget. The plan reflects appropriate milestones and activities.

Key project personnel include the Project Director, a Project Coordinator and Evaluator, whose resumes are noted in Appendix F. The evaluator has previous experience conducting comparable evaluations as well as has two decades of evaluation experience. The Project Director has managed the Capital Region Project Lead the Way Network since 2009 and has recruited new schools and expanded the network; the proposed project will be a continuation of that work to continue expansion.

The applicant's proposal does not reflect new work or a departure from its current focus. In that sense, building upon its previous expansion success and given its relationships and partnerships (P-20 council, foundations, LEAs and IHEs), the applicant's capacity to continue expansion at the rate it proposes is clear (p. 11).

**Weaknesses:**

Although a description of competencies is described on pages 29-30 for the Coordinator position to be hired upon award, the description would be strengthened if it indicated previous experience supporting grant-funded projects, project management or coordination, an understanding of data collection, or other similar competencies or past experience that would better align with the position description.

**Reader's Score:** 23

**Selection Criteria - Quality of the Project Evaluation**

1. The Secretary considers the quality of the project evaluation. In determining the quality of the project evaluation to be conducted, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well-designed experimental study or a well-designed quasi-experimental study.

(2) The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.

(3) The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.

(4) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

**Strengths:**

Scored by another reviewer.

**Weaknesses:**

Scored by another reviewer.

**Reader's Score: 0**

**Priority Questions**

**Competitive Preference Priority 6 - Competitive Preference Priority 6**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on

(a) improving young children's school readiness (including social, emotional, and cognitive readiness) so that children are prepared for success in core academic subjects (as defined in section 9101(11) of the ESEA);

(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and

(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

**Competitive Preference Priority 7 - Competitive Preference Priority 7**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12 students that

(a) address students' preparedness and expectations related to college;

(b) help students understand issues of college affordability and the financial aid and college application processes; and

(c) provide support to students from peers and knowledgeable adults.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

**Competitive Preference Priority 8 - Competitive Preference Priority 8**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or the linguistic and academic needs of limited English proficient students. To meet this priority, applications must provide for the implementation of particular practices, strategies, or programs that are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

**Competitive Preference Priority 9 - Competitive Preference Priority 9**

1. We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

**Competitive Preference Priority 10 - Competitive Preference Priority 10**

1. We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.

**Strengths:**

The PLTW curriculum heavily relies on the use of digital materials to engage students in engineering electives and focuses on developing teacher effectiveness through the improved use of technology (summer training)

**Weaknesses:**

No weaknesses noted.

**Reader's Score:** 1

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**Status:** Submitted

**Last Updated:** 08/04/2012 04:35 PM

Status: Submitted

Last Updated: 08/04/2012 04:39 PM

## Technical Review Coversheet

Applicant: LEED Sacramento (U411B120043)

Reader #3: \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Summary Statement</b>		
<b>Summary Statement</b>		
1. Summary Statement	0	0
<b>Sub Total</b>	<b>0</b>	<b>0</b>
<b>Selection Criteria</b>		
<b>Quality of Project Design</b>		
1. Project Design	25	0
<b>Significance</b>		
1. Significance	25	0
<b>Quality of the Management Plan and Personnel</b>		
1. Mgmt Plan and Personnel	25	0
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	25	23
<b>Sub Total</b>	<b>100</b>	<b>23</b>
<b>Priority Questions</b>		
<b>Competitive Preference Priority 6</b>		
<b>Competitive Preference Priority 6</b>		
1. CCP 6	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 7</b>		
<b>Competitive Preference Priority 7</b>		
1. CCP 7	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 8</b>		
<b>Competitive Preference Priority 8</b>		
1. CPP 8	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 9</b>		
<b>Competitive Preference Priority 9</b>		
1. CPP 9	1	
<b>Sub Total</b>	<b>1</b>	

**Competitive Preference Priority 10**

**Competitive Preference Priority 10**

1. CPP 10

**Sub Total** 1

**Total** 105 23

# Technical Review Form

Panel #2 - Validation Panel - 2: 84.411B

Reader #3: \*\*\*\*\*

Applicant: LEED Sacramento (U411B120043)

## Questions

### Summary Statement - Summary Statement

#### 1. Summary Statement (Optional):

##### General:

The proposal articulates a well outline experimental design to validate the PLTW impact and implementation. Each of the key components required in the RFA are addressed thoroughly and effectively. The external evaluation is clear and the evaluation partner demonstrates the skills and expertise needed to carry out the multi-level evaluation design. The proposal would be strengthened by including a programmatic logic model as well as the evaluation model.

Reader's Score: 0

### Selection Criteria - Quality of Project Design

#### 1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are (a) aligned with the priorities the eligible applicant is seeking to meet, and (b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

(3) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start-up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

##### Strengths:

N/A

##### Weaknesses:

N/A

Reader's Score: 0

## Selection Criteria - Significance

1. The Secretary considers the significance of the project. In determining the significance of the project, the Secretary considers the following factors:

(1) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

(2) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.

### Strengths:

N/A

### Weaknesses:

N/A

Reader's Score: 0

## Selection Criteria - Quality of the Management Plan and Personnel

1. The Secretary considers the quality of the management plan and personnel for the proposed project. In determining the quality of the management plan and personnel for the proposed project, the Secretary considers the following factors:

(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.

(2) The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing complex projects.

(3) The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a State or regional level (as appropriate, based on the results of the proposed project) working directly, or through other partners, either during or following the end of the grant period.

### Strengths:

N/A

### Weaknesses:

N/A

Reader's Score: 0

## Selection Criteria - Quality of the Project Evaluation

1. The Secretary considers the quality of the project evaluation. In determining the quality of the project evaluation to be conducted, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well-designed experimental study or a well-designed quasi-experimental study.

(2) The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.

(3) The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.

(4) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

**Strengths:**

The applicant offers a high quality proposal that addresses each of the criteria outlined in the RFP. The five impact and 2 implementation research questions are well articulated and include measurements for each as well as reporting of findings. The table on pp. 2-3 clearly states the research questions, the variables/measures, the source of the data and the analysis and comparison to be used to determine project impact. The current proposal builds off of former research and replicates the methodology extending the evaluation of the implementation of the PLTW project to address gaps in the previous research that can illuminate factors that impact student success. The engagement of the external evaluator is clear and well articulated in the proposal. The qualifications profile of the evaluator demonstrates the ability to carry out the project evaluation. The sampling selection and assignment of intervention and comparison group is clear and the proposal addresses both internal and external validity issues as well as reliability of instrumentation. The levels of analysis described are appropriate for the multi-level data and are supported in the research literature for determining impact. The table on page 8 clearly outlines the outcomes expected the treatment effect and the type of statistical model to be used to determine program impact. Implementation analysis plan using observation are well thought out and articulated and should offer clear snapshots of the programs implementation that will increase the potential for replication if PLTW effectiveness is supported by the evaluation. The timeline on pp 24-27 clearly integrates the evaluation plan into the key management responsibilities and the evaluator is included in each of the major activities and milestones of the management plan. The budget for the evaluation seems to be reasonable considering the evaluation plan is complex and multi-staged.

**Weaknesses:**

The proposal does not include a programmatic logic model. It is not clear through the milestones and timeline that there will be enough time to complete the analysis and reporting for the final year of data. The budget summary page has a discrepancy in the contractual costs for the evaluation from 160K for years 1-4 to 168K and 220K for year 5 to 228K.

**Reader's Score: 23**

**Priority Questions**

**Competitive Preference Priority 6 - Competitive Preference Priority 6**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on

(a) improving young children's school readiness (including social, emotional, and cognitive readiness) so that children are prepared for success in core academic subjects (as defined in section 9101(11) of the ESEA);

(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and

(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

#### **Competitive Preference Priority 7 - Competitive Preference Priority 7**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12 students that

(a) address students' preparedness and expectations related to college;

(b) help students understand issues of college affordability and the financial aid and college application processes; and

(c) provide support to students from peers and knowledgeable adults.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

#### **Competitive Preference Priority 8 - Competitive Preference Priority 8**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or the linguistic and academic needs of limited English proficient students. To meet this priority, applications must provide for the implementation of particular practices, strategies, or programs that are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

**Competitive Preference Priority 9 - Competitive Preference Priority 9**

1. We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

**Competitive Preference Priority 10 - Competitive Preference Priority 10**

1. We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

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**Status:** Submitted  
**Last Updated:** 08/04/2012 04:39 PM

Status: Submitted

Last Updated: 08/06/2012 09:35 AM

## Technical Review Coversheet

Applicant: LEED Sacramento (U411B120043)

Reader #4: \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Summary Statement</b>		
<b>Summary Statement</b>		
1. Summary Statement	0	0
<b>Sub Total</b>	<b>0</b>	<b>0</b>
<b>Selection Criteria</b>		
<b>Quality of Project Design</b>		
1. Project Design	25	25
<b>Significance</b>		
1. Significance	25	23
<b>Quality of the Management Plan and Personnel</b>		
1. Mgmt Plan and Personnel	25	24
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	25	0
<b>Sub Total</b>	<b>100</b>	<b>72</b>
<b>Priority Questions</b>		
<b>Competitive Preference Priority 6</b>		
<b>Competitive Preference Priority 6</b>		
1. CCP 6	1	0
<b>Sub Total</b>	<b>1</b>	<b>0</b>
<b>Competitive Preference Priority 7</b>		
<b>Competitive Preference Priority 7</b>		
1. CCP 7	1	0
<b>Sub Total</b>	<b>1</b>	<b>0</b>
<b>Competitive Preference Priority 8</b>		
<b>Competitive Preference Priority 8</b>		
1. CPP 8	1	0
<b>Sub Total</b>	<b>1</b>	<b>0</b>
<b>Competitive Preference Priority 9</b>		
<b>Competitive Preference Priority 9</b>		
1. CPP 9	1	0
<b>Sub Total</b>	<b>1</b>	<b>0</b>

**Competitive Preference Priority 10**

**Competitive Preference Priority 10**

1. CPP 10

	1	1
<b>Sub Total</b>	1	1
<b>Total</b>	105	73

# Technical Review Form

Panel #2 - Validation Panel - 2: 84.411B

Reader #4: \*\*\*\*\*

Applicant: LEED Sacramento (U411B120043)

## Questions

### Summary Statement - Summary Statement

#### 1. Summary Statement (Optional):

##### General:

Project Lead the Way (LEED) proposes to use a quasi-experimental design to validate the 9-12 engineering curriculum. The Absolute Priority is for STEM education (#2) and the Competitive Preference priority is #10 Technology. The organization has devised a very extensive evaluation system to validate the current and intended use of the project.

Reader's Score: 0

### Selection Criteria - Quality of Project Design

#### 1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are (a) aligned with the priorities the eligible applicant is seeking to meet, and (b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

(3) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start-up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

##### Strengths:

The applicant plans to expand its current program in Sacramento to 5 additional high schools for a total of 1600 students with 40 students in 40 cohorts. pg. e33

Three explicit goals are listed. The applicant plans to implement PLTW in 40 schools with increased membership of underrepresented groups and evaluate the program using a quasi-experimental design. pg. e44 An ambitious goal, but a solid plan exists to manage the proposal and create sustainability.

PLTW has been proven to utilize technology to increase engineering skills, raise graduation rates, and close the achievement gap for the underrepresented groups.

The applicant has in place a sound system and partnerships to carry out the purpose of the project. The group has gone from 5 schools to 60 schools (20 m.s. and 40 h.s.) in five years. pg. e46

STEM education is presented as part of the mission of the LEED group.

There is a reasonable cost of \$635.36 per student which includes technology, teacher training, and scholarships. pg. e48

An estimate of costs to reach 100,000, 250,000 and 500,000 has been provided. pg. e48

**Weaknesses:**

There are no apparent weaknesses in project design.

**Reader's Score: 25**

**Selection Criteria - Significance**

**1. The Secretary considers the significance of the project. In determining the significance of the project, the Secretary considers the following factors:**

**(1) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.**

**(2) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.**

**(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.**

**Strengths:**

The project has been determined as successful through endorsements of quality by the Gates Foundations and A. Duncan.

True Outcomes has provided acceptance of the project with research that supports past successes of the LEED program. pg. e53

The applicant plans on reaching 50% of minorities and 30% of the female population in a random selection of students in the 40 different schools. This plan replicates the Barrow et al study (2009) of I Can Learn on Mathematics. An article outlining the research and results is found in the appendix.

A general presentation of several studies purporting the success of PLTW was made. pg. e53

**Weaknesses:**

The applicant mentions use of What Works and that no studies were found specifically to support the proposed research project. Overall evidence that this is an exceptional approach is lacking. It would have been beneficial to see data from past research on PLTW as conducted by LEED. pgs. e49-50

There is no mention of links to the Next Generation Science Standards and alignment with the elements of the curriculum that might fit.

**Reader's Score: 23**

**Selection Criteria - Quality of the Management Plan and Personnel**

**1. The Secretary considers the quality of the management plan and personnel for the proposed project. In determining the quality of the management plan and personnel for the proposed project, the Secretary considers the following factors:**

**(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and**

within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.

(2) The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing complex projects.

(3) The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a State or regional level (as appropriate, based on the results of the proposed project) working directly, or through other partners, either during or following the end of the grant period.

**Strengths:**

A thorough management plan is provided that is consistent with project objectives. It includes multiple partners, data collection and analysis, and dissemination. pgs. e59-62

The CEO has a long history of managing LEED. pgs. e62-63

The Director of Education and Project Director are well-qualified for the extensive project and well-recognized for accomplishments. pg. e63

The evaluator is capable of the extensive project with over 20 years of experience. pg. e65

The applicant's capacity to bring the proposed project to scale is presented. The project appears to have strong management and partnerships in place. The P-20 Council appears to be a strong component of the project. pg. e65

**WEAKNESSES:** A PLTW Network Coordinator will be hired. Responsibilities and competencies were well presented. pgs. e63-65. Because of the magnitude of responsibilities and competencies, this position would better serve the project if more than a .5 FTE was in place.

**Weaknesses:**

A PLTW Network Coordinator will be hired. Responsibilities and competencies were well presented. pgs. e63-65. Because of the magnitude of responsibilities and competencies, this position would better serve the project if more than a .5 FTE was in place..

**Reader's Score: 24**

**Selection Criteria - Quality of the Project Evaluation**

1. The Secretary considers the quality of the project evaluation. In determining the quality of the project evaluation to be conducted, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well-designed experimental study or a well-designed quasi-experimental study.

(2) The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.

(3) The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.

(4) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.

**Strengths:**

NA

**Weaknesses:**

NA

Reader's Score: 0

### Priority Questions

#### Competitive Preference Priority 6 - Competitive Preference Priority 6

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on

(a) improving young children's school readiness (including social, emotional, and cognitive readiness) so that children are prepared for success in core academic subjects (as defined in section 9101(11) of the ESEA);

(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and

(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.

#### Strengths:

The applicant does not address this priority.

#### Weaknesses:

Reader's Score: 0

#### Competitive Preference Priority 7 - Competitive Preference Priority 7

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12 students that

(a) address students' preparedness and expectations related to college;

(b) help students understand issues of college affordability and the financial aid and college application processes; and

(c) provide support to students from peers and knowledgeable adults.

#### Strengths:

The applicant does not address this priority.

#### Weaknesses:

Reader's Score: 0

### Competitive Preference Priority 8 - Competitive Preference Priority 8

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or the linguistic and academic needs of limited English proficient students. To meet this priority, applications must provide for the implementation of particular practices, strategies, or programs that are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

**Strengths:**

The applicant does not address this priority.

**Weaknesses:**

Reader's Score: 0

### Competitive Preference Priority 9 - Competitive Preference Priority 9

1. We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.

**Strengths:**

The applicant does not address this priority.

**Weaknesses:**

Reader's Score: 0

### Competitive Preference Priority 10 - Competitive Preference Priority 10

1. We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.

**Strengths:**

The applicant uses PLTW curriculum in engineering at the middle and high school levels. As part of that curriculum, technology is provided to students. Technology used includes computers, robotics, and prototyping machines. There will be four courses offered to students, one each year, that include the PLTW curriculum and technology. There is a two-week training leading to certification for all teachers which includes training in technology use. pgs. e36-42

**Weaknesses:**

There are no apparent weaknesses.

**Reader's Score:** 1

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**Status:** Submitted

**Last Updated:** 08/06/2012 09:35 AM

Status: Submitted

Last Updated: 08/04/2012 04:47 PM

## Technical Review Coversheet

Applicant: LEED Sacramento (U411B120043)

Reader #5: \*\*\*\*\*

	Points Possible	Points Scored
<b>Questions</b>		
<b>Summary Statement</b>		
<b>Summary Statement</b>		
1. Summary Statement	0	0
<b>Sub Total</b>	<b>0</b>	<b>0</b>
<b>Selection Criteria</b>		
<b>Quality of Project Design</b>		
1. Project Design	25	0
<b>Significance</b>		
1. Significance	25	0
<b>Quality of the Management Plan and Personnel</b>		
1. Mgmt Plan and Personnel	25	0
<b>Quality of the Project Evaluation</b>		
1. Project Evaluation	25	22
<b>Sub Total</b>	<b>100</b>	<b>22</b>
<b>Priority Questions</b>		
<b>Competitive Preference Priority 6</b>		
<b>Competitive Preference Priority 6</b>		
1. CCP 6	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 7</b>		
<b>Competitive Preference Priority 7</b>		
1. CCP 7	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 8</b>		
<b>Competitive Preference Priority 8</b>		
1. CPP 8	1	
<b>Sub Total</b>	<b>1</b>	
<b>Competitive Preference Priority 9</b>		
<b>Competitive Preference Priority 9</b>		
1. CPP 9	1	
<b>Sub Total</b>	<b>1</b>	

**Competitive Preference Priority 10**

**Competitive Preference Priority 10**

1. CPP 10

**Sub Total** 1

**Total** 105 22

# Technical Review Form

Panel #2 - Validation Panel - 2: 84.411B

Reader #5: \*\*\*\*\*

Applicant: LEED Sacramento (U411B120043)

## Questions

### Summary Statement - Summary Statement

#### 1. Summary Statement (Optional):

General:

N/A

Reader's Score: 0

### Selection Criteria - Quality of Project Design

#### 1. The Secretary considers the quality of the design of the proposed project. In determining the quality of the project design, the Secretary considers the following factors:

(1) The extent to which the proposed project has a clear set of goals and an explicit strategy, with actions that are (a) aligned with the priorities the eligible applicant is seeking to meet, and (b) expected to result in achieving the goals, objectives, and outcomes of the proposed project.

(2) The potential and planning for the incorporation of project purposes, activities, or benefits into the ongoing work of the eligible applicant and any other partners at the end of the Validation grant.

(3) The extent to which the costs are reasonable in relation to the objectives, design, and potential significance of the proposed project.

(4) The eligible applicant's estimate of the cost of the proposed project, which includes the start-up and operating costs per student per year (including indirect costs) for reaching the total number of students proposed to be served by the project. The eligible applicant must include an estimate of the costs for the eligible applicant or others (including other partners) to reach 100,000, 250,000, and 500,000 students.

Strengths:

N/A

Weaknesses:

N/A

Reader's Score: 0

### Selection Criteria - Significance

#### 1. The Secretary considers the significance of the project. In determining the significance of the project, the Secretary considers the following factors:

(1) The extent to which the proposed project represents an exceptional approach to the priority or priorities established for the competition.

(2) The extent to which the services to be provided by the proposed project reflect up-to-date knowledge from research and effective practice.

(3) The importance and magnitude of the effect expected to be obtained by the proposed project, including the extent to which the project will substantially and measurably improve student achievement or student growth, close achievement gaps, decrease dropout rates, increase high school graduation rates, or increase college enrollment and completion rates. The evidence in support of the importance and magnitude of the effect would be the research-based evidence provided by the eligible applicant to support the proposed project.

**Strengths:**

N/A

**Weaknesses:**

N/A

**Reader's Score: 0**

**Selection Criteria - Quality of the Management Plan and Personnel**

1. The Secretary considers the quality of the management plan and personnel for the proposed project. In determining the quality of the management plan and personnel for the proposed project, the Secretary considers the following factors:

(1) The adequacy of the management plan to achieve the objectives of the proposed project on time and within budget, including clearly defined responsibilities, timelines, and milestones for accomplishing project tasks, as well as tasks related to the sustainability and scalability of the proposed project.

(2) The qualifications, including relevant training and experience, of the project director and key project personnel, especially in managing complex projects.

(3) The eligible applicant's capacity (e.g., in terms of qualified personnel, financial resources, or management capacity) to bring the proposed project to scale on a State or regional level (as appropriate, based on the results of the proposed project) working directly, or through other partners, either during or following the end of the grant period.

**Strengths:**

N/A

**Weaknesses:**

N/A

**Reader's Score: 0**

**Selection Criteria - Quality of the Project Evaluation**

The Secretary considers the quality of the project evaluation. In determining the quality of the project evaluation to be conducted, the Secretary considers the following factors:

(1) The extent to which the methods of evaluation will include a well-designed experimental study or a well-designed quasi-experimental study.

**(2) The extent to which the methods of evaluation will provide high-quality implementation data and performance feedback, and permit periodic assessment of progress toward achieving intended outcomes.**

**(3) The extent to which the evaluation will provide sufficient information about the key elements and approach of the project so as to facilitate replication or testing in other settings.**

**(4) The extent to which the proposed project plan includes sufficient resources to carry out the project evaluation effectively.**

**Strengths:**

The proposal states that it will use a Quasi-Experimental design (page 1 narrative), but then goes on to describe a design using random assignment that looks to be an experimental design.

Research questions are clearly defined. Figure III on pages 2-3 is a table that describes each research question, the variables and measures, the source of data and the analysis plan.

The flow chart on page 7 provides a pictorial representation of the flow within each school included in the study.

Pages 7 to 12 there is a description of the statistical models used to address research questions, suggesting the models that been thought through in detail.

The evaluators plan to assess implementation fidelity (page 12) by comparing teacher logs and video of classroom instruction to rubrics.

On page 14 the evaluators describe the annual feedback, and propose they will provide interim impact estimates so staff can provide midcourse corrections.

The evaluators plan to provide a descriptive analysis that characterizes the level of implementation fidelity. Their data collection includes rubrics that define key components and instructional techniques. Their plan is to provide a clear course of action for those wishing to replicate the program.

On page 14 the evaluators describe that PLTW has a well specified curriculum and instructional approach, and the evaluation will capture adequate data to determine the extent to which these were adhered to.

The amount budgeted for the evaluation appears to be sufficient to carry out the required activities. The evaluator, John Gargani, Ph.D., has good credentials and the appropriate experience and expertise to lead this evaluation.

**Weaknesses:**

On page 3 for Research Question 4, the analysis will compare treatment and control groups to assess the extent to which the four-year PLTW experience increases the intentions of students to study STEM subjects at college. It would be helpful to compare baseline with post-program measure to determine whether there was more change within the PLTW group.

On page 3 for Research Question 5, the question is to what extent does the four-year PLTW experience increase the intentions of students to pursue a STEM related career. The analysis is treatment and control group comparison. The question about measuring increase implies looking at change over time, implying the research should include a comparison of the change over time from baseline to post-program to see whether there was more change for the PLTW group.

The outcomes for Research Question 7 (page 3), How does the four-year PLTW experience differ is to look at science and math courses taken and passed. These are outcomes that are no necessarily reflective of experience. It would be helpful if the evaluators defined 4-year PLTW experience.

The design does not describe how they will randomly assign to the treatment and control groups.

The evaluators plan to replace students to leave the program in the treatment group with students from the

control group. Depending at which time during the intervention this occurs, the replacement with students who have not had a full dose of the treatment may weaken results for the treatment group. To fully validate the effectiveness of this program, students in the treatment group should participate in the full program from beginning to end. If not, the evaluators will need to be sure to control for dosage.

The evaluators plan to provide feedback to the program on an annual basis (page 14) based on teaching logs, test results and videos. Annual feedback on process variables (implementation and performance) is not sufficient for staff to catch things as they occur. Problematic practices may go on for months before program staff are made aware of them.

The evaluation plan does not clearly describe the staffing for the evaluation.

**Reader's Score: 22**

### **Priority Questions**

#### **Competitive Preference Priority 6 - Competitive Preference Priority 6**

**1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to improve educational outcomes for high-need students who are young children (birth through 3rd grade) by enhancing the quality of early learning programs. To meet this priority, applications must focus on**

**(a) improving young children's school readiness (including social, emotional, and cognitive readiness) so that children are prepared for success in core academic subjects (as defined in section 9101(11) of the ESEA);**

**(b) improving developmental milestones and standards and aligning them with appropriate outcome measures; and**

**(c) improving alignment, collaboration, and transitions between early learning programs that serve children from birth to age three, in preschools, and in kindergarten through third grade.**

**Strengths:**

**Weaknesses:**

**Reader's Score:**

#### **Competitive Preference Priority 7 - Competitive Preference Priority 7**

**1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to enable kindergarten through grade 12 (K-12) students, particularly high school students, to successfully prepare for, enter, and graduate from a two- or four-year college. To meet this priority, applications must include practices, strategies, or programs for K-12 students that**

**(a) address students' preparedness and expectations related to college;**

**(b) help students understand issues of college affordability and the financial aid and college application processes; and**

**(c) provide support to students from peers and knowledgeable adults.**

**Strengths:**

**Weaknesses:**

**Reader's Score:**

**Competitive Preference Priority 8 - Competitive Preference Priority 8**

1. We give competitive preference to applications for projects that would implement innovative practices, strategies, or programs that are designed to address the unique learning needs of students with disabilities, including those who are assessed based on alternate academic achievement standards, or the linguistic and academic needs of limited English proficient students. To meet this priority, applications must provide for the implementation of particular practices, strategies, or programs that are designed to improve academic outcomes, close achievement gaps, and increase college- and career-readiness, including increasing high school graduation rates (as defined in this notice), for students with disabilities or limited English proficient students.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

**Competitive Preference Priority 9 - Competitive Preference Priority 9**

1. We give competitive preference to applications for projects that are designed to significantly increase efficiency in the use of time, staff, money, or other resources while improving student learning or other educational outcomes (i.e., outcome per unit of resource). Such projects may include innovative and sustainable uses of technology, modification of school schedules and teacher compensation systems, use of open educational resources (as defined in this notice), or other strategies.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

**Competitive Preference Priority 10 - Competitive Preference Priority 10**

1. We give competitive preference to applications for projects that are designed to improve student achievement or teacher effectiveness through the use of high-quality digital tools or materials, which may include preparing teachers to use the technology to improve instruction, as well as developing, implementing, or evaluating digital tools or materials.

**Strengths:**

**Weaknesses:**

**Reader's Score:**

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**Status:** Submitted  
**Last Updated:** 08/04/2012 04:47 PM