Franklin-McKinley Unified School District/Washington United Youth Center

OVERALL LESSONS LEARNED

As the Summer Science Project concluded its third and final year, the Project complied key lessons learned beyond the project goals.

First, it required a significant investment. Participating sites needed to bring a certain level of readiness and structure; Project leadership had to right-size the curricula used by front line staff, offering guidance but not too much; and the Project provided significant time and resources for technical assistance, planning, assessment, and training.

Second, it was important to partner the approach and content of science with a focus on quality. Science instruction and program quality initiatives are natural partners, and may even be necessary partners.

Third, participating programs reaped many additional, and some unexpected, benefits through the Project. These additional benefits included stronger staff and staff retention, improved program quality throughout the summer and school year programs, and improved connections to the school day. These benefits are notable because these are the very areas in which programs often struggle.

ATTENDANCE & ENROLLMENT

	FMUSD/SJUSD 2014	All Communities 2014
Total youth served	232	1,173
% youth attending daily (average)	92%	-
Total hours of programming	143	115 (average)
Average hours attended	129	-

Source: Afterschoolattendance.net, Cityspan attendance system data, and additional data supplied by the sites, September 2014.

YOUTH OUTCOMES (% Agreement)

Interest and Engagement with STEM	FMUSD/SJUSD 2014	FMUSD/SJUSD 2013	All Communities 2014
The summer science program made science more fun.	93%	95%	91%
The summer science program made science more interesting.	86%	90%	89%
The summer science program made me more excited to do science activities.	87%	87%	86%
I enjoy learning science in school.	81%	95%	84%
The summer science program made me want to play more with science toys.	85%	93%	84%
The summer science program made me want to learn more about science.	85%	87%	83%
The summer science program made me more excited to learn about science in school.	82%	83%	82%

Confidence in STEM	FMUSD/SJUSD 2014	FMUSD/SJUSD 2013	All Communities 2014
I am good at science.	63%	68%	72%
Science makes me think.	78%	82%	82%
Science is easy.	57%	68%	67%

Interest in STEM Careers

I know what scientists do. — 66% (FMUSD/SJUSD 2014), 69% (All Communities 2014)

The summer science program made me want a job when I am older. — 48% (FMUSD/SJUSD 2014), 57% (All Communities 2014)

- All Communities 2014
- FMUSD/SJUSD 2014

40%   60%   80%   100%

Perception of Program Quality

The summer science program had nice instructors. — 94% (FMUSD/SJUSD 2014), 95% (All Communities 2014)

The summer science program had fun science activities. — 94% (FMUSD/SJUSD 2014), 94% (All Communities 2014)

- All Communities 2014
- FMUSD/SJUSD 2014

40%   60%   80%   100%

Source: Youth Surveys, Summer 2013 (n=524) and Summer 2014 (n=728); Percentage indicates the proportion of youth who answered "Yes" to each question.
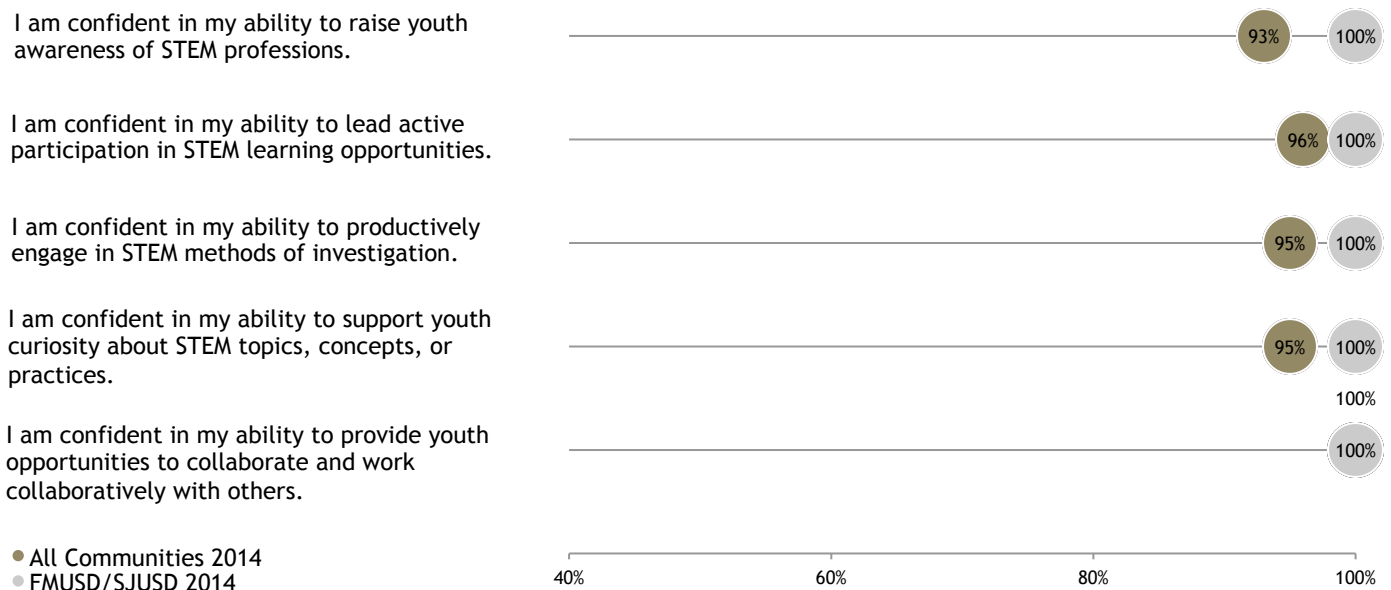
STAFF OUTCOMES (% Agreement)

Sense of Self-Efficacy Leading STEM Activities	FMUSD/SJUSD 2014	FMUSD/SJUSD 2013	All Communities 2014
I generally lead summer STEM activities effectively.	100%	100%	95%
I am continually finding better ways to lead STEM activities.	100%	100%	95%
When leading a summer STEM activity, I usually welcome questions from children and youth.	100%	100%	95%
I am very effective in monitoring STEM activities.	100%	88%	93%
Given a choice, I would invite the site coordinator to evaluate my leading of STEM activities.	100%	88%	90%
I am typically able to answer the STEM questions of children and youth in my program.	100%	88%	95%
I understand STEM concepts well enough to be effective in leading summer STEM activities.	100%	100%	95%

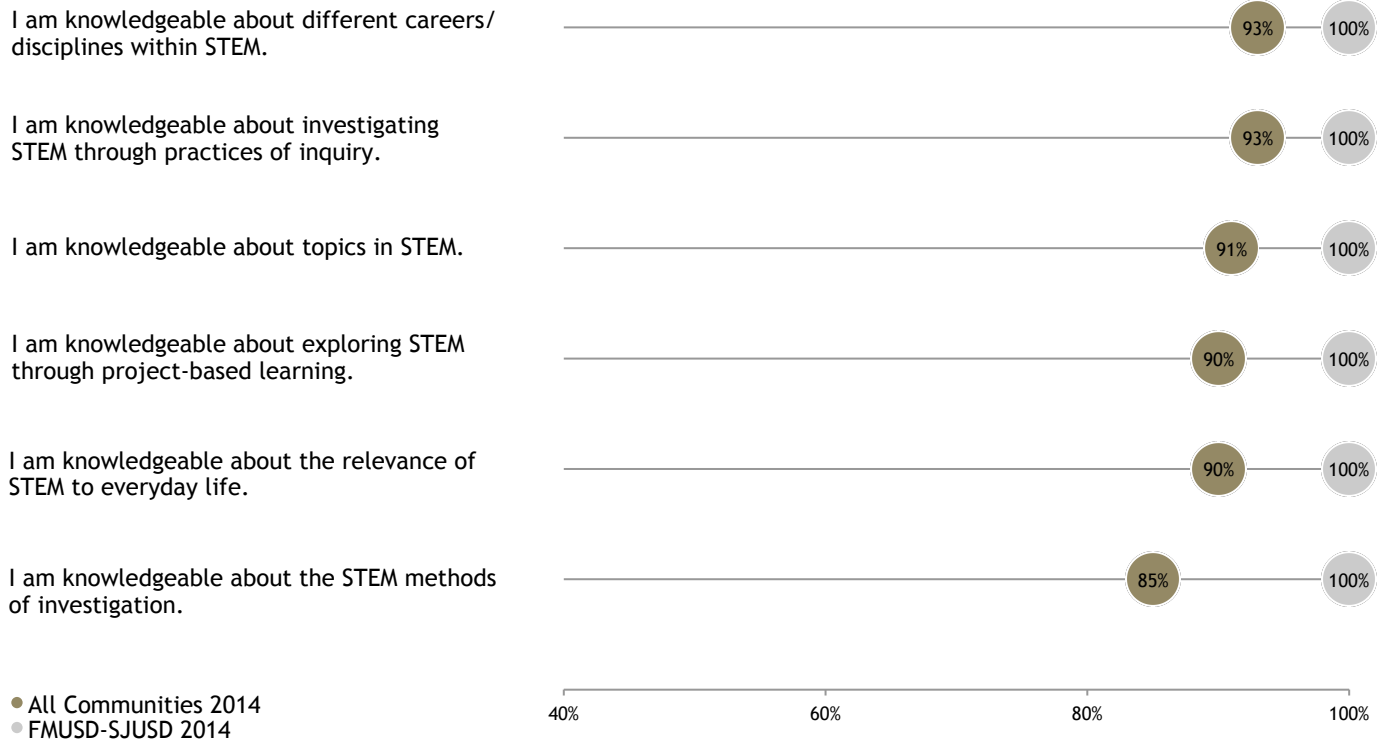|	FMUSD/SJUSD 2014	FMUSD/SJUSD 2013	All Communities 2014
I do not find it difficult to explain to children and youth why STEM experiments work.	86%	88%	86%
When children and youth have difficulty understanding a STEM concept, I am usually able to help them understand it better.	100%	100%	93%
I know what to do to get youth interested in STEM.	100%	100%	93%
When I try very hard, I lead STEM activities as well as I lead most other activities.	86%	88%	90%

Use of STEM Teaching Skills	FMUSD/SJUSD 2014	FMUSD/SJUSD 2013	All Communities 2014
I know the steps necessary to teach STEM concepts effectively.	100%	100%	93%
I know how to embed discussion of careers within a hands-on STEM activity.	100%	86%	90%
I know how to make STEM relevant to the youth's everyday life.	100%	100%	93%
I know how to use questioning to engage youth.	100%	100%	100%
I know how to use reflection techniques in the classroom that engage all youth.	100%	100%	98%
I know how to engage youth in STEM topics, concepts, and practices.	100%	100%	95%
I know how to lead a structured lesson plan with a learning objective, introduction, hands-on activity, and reflection.	100%	100%	100%

Confidence Facilitating STEM Activities

Statement	All Communities 2014	FMUSD/SJUSD 2014
I am confident in my ability to raise youth awareness of STEM professions.	93%	100%
I am confident in my ability to lead active participation in STEM learning opportunities.	96%	100%
I am confident in my ability to productively engage in STEM methods of investigation.	95%	100%
I am confident in my ability to support youth curiosity about STEM topics, concepts, or practices.	95%	100%
I am confident in my ability to provide youth opportunities to collaborate and work collaboratively with others.	100%	100%

● All Communities 2014
● FMUSD/SJUSD 2014

40%   60%   80%   100%

Knowledge of STEM Curriculum Topics

I am knowledgeable about different careers/disciplines within STEM. — 93% | 100%

I am knowledgeable about investigating STEM through practices of inquiry. — 93% | 100%

I am knowledgeable about topics in STEM. — 91% | 100%

I am knowledgeable about exploring STEM through project-based learning. — 90% | 100%

I am knowledgeable about the relevance of STEM to everyday life. — 90% | 100%

I am knowledgeable about the STEM methods of investigation. — 85% | 100%

● All Communities 2014
● FMUSD-SJUSD 2014

40%   60%   80%   100%

Impact of STEM Training on Teaching Skills	FMUSD/SJUSD 2014	FMUSD/SJUSD 2013	All Communities 2014
I learned strategies to increase youths' interest in STEM.	86%	88%	88%
I learned strategies to increase youths' confidence in STEM.	86%	100%	81%
I implemented activities that increased youths' interest in STEM.	86%	88%	91%
I implemented activities that increased youths' confidence in STEM.	100%	100%	93%
I feel more confident leading STEM activities in afterschool.	86%	88%	88%
I feel more confident leading STEM activities in the summer.	100%	100%	93%

Source: Staff Surveys, Post-Summer 2013 (n=38)* and Post-Summer 2014 (n=41); Percentage indicates the proportion of staff who answered "Agree" or "Strongly Agree" to each question.
*Data from 2013 in this Community Profile includes all staff who completed a post-summer survey, which may differ from the data presented in the 2013 Summer Science Pilot Project Evaluation Report that included only staff who completed both Pre-and Post-Summer surveys.

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This project was led by the Partnership for Children & Youth and Techbridge, in collaboration with project communities in Oakland, Mt. Diablo, Franklin-McKinley, and San Jose Unified School Districts.

2014 Summer Science Project Evaluation Report and Community Profiles prepared by Public Profit.