Concord Evaluation Group

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Evaluation of National Engineers Week Future City Program

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Background

National Engineers Week Foundation (EWeek) hired Concord Evaluation Group (CEG) in 2011 to conduct an independent evaluation of the Future City program (http://futurecity.org). Future City has been operating since 1992. According to EWeek, the Future City program is "a national, project-based learning experience where students in 6th, 7th, and 8th grade imagine, design, and build cities of the future. Students work as a team with an educator and engineer mentor to plan cities using SimCity™ 4 Deluxe software; research and write solutions to an engineering problem; build tabletop scale models with recycled materials; and present their ideas before judges at Regional Competitions in January. Regional winners represent their region at the National Finals in Washington, DC in February."

Winners of the 2012 Competition: St. Mary Parish, Wisconsin

Future City's cross-curricular educational program gives students an opportunity to do the things that engineers do—identify problems; brainstorm ideas; design solutions; test, retest and build; and share their results (i.e., the engineering design process). With this at its center, Future City is designed to provide an engaging way to build students' "21st century skills."[1] Students participating in Future City are expected to:

- Apply math and science concepts to real-world issues.
- Develop writing, public speaking, problem solving, and time management skills.
- Research and propose solutions to engineering challenges.
- Discover different types of engineering and explore career options.
- Learn how their communities work and become better citizens.
- Develop strong teamwork skills.

[1] Stuart, Lisa (1999). *21st Century Skills for 21st Century Jobs.* A Report of the US Department of Commerce, US Department of Education, US Department of Labor, National Institute of Literacy, and the Small Business Administration. Washington, DC: US Government Printing Office.

EWeek hired CEG to assess the impact of Future City on its participants as well as to gather data on the program's strengths and weaknesses in order to enhance it for coming years.

Evaluation Design

The evaluation study was designed to capture general data from all Future City participants through surveys administered to students, parents, and mentors at the Regional Competitions (some regions were unable to administer the surveys on competition day and administered them immediately after). Teachers and Regional Coordinators were surveyed online after the competition in all regions.

In addition, the evaluation study was designed to collect in-depth data from a sample of programs from across the country. Five regions volunteered to take part in site visits (ID, MA, KS, NJ, and IN). Within these regions, Regional Coordinators contacted teachers to identify those who were interested in participating in the site visits. Our final Site Visit sample included 19 schools across five states.

CEG worked with Thea Sahr from the national Future City office and Carol Dostal, Regional Coordinator for Indiana, to develop the surveys and refine the evaluation design. The data collection instruments are included in the Appendix. These include:

- Student pre-test and post-test surveys, Site Visit sample
- Student survey, national sample
- Parent survey
- Teacher survey
- Mentor survey

Data were collected using the following schedule:

September-October 2011
Student Pre-Test Surveys were administered at Site Visit schools

Late October-December 2011
Site Visits were conducted in 5 states

Late December 2011-January 2012
Student Post-Test Surveys were administered at Site Visit schools

Late January-March 2012
Student, Parent, Mentor, Teacher, and Regional Coordinator Surveys were administered to a national sample of participants[2]

[2] Including teachers from the Site Visit schools.

Participants

Sample Sizes

The table below summarizes the number of students, parents, mentors, and teachers that participated in the study from each region. The table also indicates whether the Regional Coordinators (RCs) responded to the survey.

Table 1:
Survey Respondents in Each Subgroup

	Students	Parents	Teachers	Mentors	RCs
Alabama	51 (2.3%)	28 (4.7%)	4 (1.2%)	5 (1.9%)	Yes
Arizona	33 (1.5%)	5 (0.8%)	14 (4.0%)	7 (2.7%)	Yes
California	0 (0.0%)	0 (0.0%)	5 (1.4%)	1 (0.4%)	Yes
Colorado	14 (0.6%)	12 (2.0%)	1 (0.3%)	1 (0.4%)	
Florida (South)	18 (0.8%)	20 (3.4%)	12 (3.5%)	8 (3.1%)	Yes
Florida (Tampa Bay)	73 (3.3%)	36 (6.1%)	7 (2.0%)	4 (1.5%)	
Georgia	65 (2.9%)	12 (2.0%)	27 (7.8%)	21 (8.0%)	Yes
Great Plains	103 (4.7%)	18 (3.0%)	26 (7.5%)	10 (3.8%)	Yes
Idaho	98 (4.4%)	11 (1.9%)	10 (2.9%)	12 (4.6%)	Yes
Illinois	28 (1.3%)	14 (2.4%)	6 (1.7%)	2 (0.8%)	Yes
Indiana	151 (6.8%)	19 (3.2%)	7 (2.0%)	4 (1.5%)	
Iowa	68 (3.1%)	29 (4.9%)	10 (2.9%)	2 (0.8%)	Yes
Kentucky	17 (0.8%)	12 (2.0%)	2 (0.6%)	0 (0.0%)	Yes
Louisiana	10 (0.5%)	16 (2.7%)	0 (0.0%)	2 (0.8%)	Yes
Michigan	18 (0.8%)	1 (0.2%)	10 (2.9%)	2 (0.8%)	Yes
Mid-Atlantic	52 (2.3%)	19 (3.2%)	7 (2.0%)	6 (2.3%)	
Minnesota	104 (4.7%)	15 (2.5%)	11 (3.2%)	17 (6.5%)	Yes
Nebraska	43 (1.9%)	10 (1.7%)	5 (1.4%)	1 (0.4%)	Yes
Nevada	30 (1.4%)	13 (2.2%)	9 (2.6%)	3 (1.1%)	Yes
New England	76 (3.4%)	9 (1.5%)	11 (3.2%)	6 (2.3%)	Yes

	Students	Parents	Teachers	Mentors	RCs
New Jersey	220 (9.9%)	17 (2.9%)	20 (5.8%)	15 (5.7%)	Yes
New York (Albany)	49 (2.2%)	8 (1.3%)	8 (2.3%)	10 (3.8%)	Yes
New York (City)	0 (0.0%)	0 (0.0%)	7 (2.0%)	0 (0.0%)	Yes
New York (Western)	0 (0.0%)	0 (0.0%)	9 (2.6%)	5 (1.9%)	
North Carolina	24 1.1%)	7 (1.2%)	8 (2.3%)	5 (1.9%)	
Ohio	24 (1.1%)	29 (4.9%)	12 (3.5%)	10 (3.8%)	
Oklahoma	45 (2.0%)	16 (2.7%)	6 (1.7%)	5 (1.9%)	Yes
Pennsylvania (Ctrl)	3 (0.1%)	43 (7.3%)	11 (3.2%)	5 (1.9%)	
Pennsylvania (Phil)	303 (13.7%)	53 (8.9%)	22 (6.3%)	16 (6.1%)	Yes
Pennsylvania (Pitt)	30 (1.4%)	12 (2.0%)	10 (2.9%)	8 (3.1%)	
South Carolina	79 (3.6%)	34 (5.7%)	6 (1.7%)	12 (4.6%)	Yes(2)
Texas (Central)	81 (3.7%)	23 (3.9%)	4 (1.2%)	10 (3.8%)	Yes
Texas (Houston)	84 (3.8%)	13 (2.2%0	6 (1.7%)	13 (5.0%)	Yes
Texas (North)	19 (0.9%)	2 (0.3%)	12 (3.5%)	3 (1.1%)	
Virginia	68 (3.1%)	37 (6.2%)	7 (2.0%)	4 (1.5%)	Yes
Washington	50 (2.3%)	0 (0.0%)	7 (2.0%)	9 (3.4%)	
Wisconsin	84 (3.8%)	0 (0.0%)	8 (2.3%)	18 (6.9%)	Yes
Totals	**2215**	**593**	**347**	**262**	**27**

Fifteen percent of the respondents (n = 332) summarized in the table above represent students and teachers from the Site Visit schools. The table below summarizes the number and percent of students and teachers from the Site Visit schools.

Table 2:
Sample Sizes for Site Visit Schools

Region	Students	Teachers
Great Plains	39 (12.1%)	5 (26.3%)
Idaho	49 (15.2%)	4 (21.1%)
Indiana	103 (32.0%)	2 (10.5%)
New England	44 (13.7%)	3 (15.8%)
New Jersey	97 (30.1%)	5 (26.3%)
Total	**332 (100%)**	**19 (100%)**

Students

Background and Demographic Characteristics

For most students in the study (78%), this was their first year participating in Future City. Roughly 16% of the students in our study had participated in Future City for two years, and only 1% had participated for three years. Appendix D provides a summary of this data by region.

Table 3:
Years of Future City Participation

	Frequency	Percent
First time	1734	78.3
Second time	356	16.1
Third time	23	1.0
Missing	102	4.6
Total	**2215**	**100.0**

Our student sample included only slightly more males than females (52% versus 46%). It is unknown whether more males chose to respond to the survey, or whether more males participate in the competition than females.

While most students in our sample were in 6th, 7th or 8th grade, there was a small number of students in younger grades. As we will discuss later, there is at least one school that allows students as young as 3rd grade to participate in Future City.

White students comprise about 70% of the Future City sample (72% of U.S. citizens are White), followed by Asian students (11%). Hispanic/Latino students comprised 10% of the sample, followed by African-American students at 9%.

These student characteristics are summarized in the table below.

Table 4:
Student Demographic Characteristics
(N = 2215)

	Frequency	Percent
Gender		
Female	1020	46.0
Male	1144	51.6
Missing	51	2.3
Grade		
Fifth	3	.1
Sixth	270	12.2
Seventh	711	32.1
Eighth	1114	50.3
Missing	117	5.3
Age		
10	8	.4
11	143	6.5
12	544	24.6
13	946	42.7
14	444	20.0
15	12	.5
Missing	118	5.3
Race/Ethnicity		
White or Caucasian	1557	70.3
Asian or Pacific Islander	244	11.0

	Frequency	Percent
Hispanic or Latino(a)	227	10.2
Black or African-American	191	8.6
Native American or Native Hawaiian	12	0.5
Missing	189	8.5

Student Motivation for Participating in Future City

We asked students at the Site Visit schools what motivated them to join Future City. Most (n = 152, 46%) reported that they decided to join because they thought it would be fun or interesting. Another 24% (n = 81) reported that they did not make a choice to join because Future City was a course requirement at their school. Five students (2%) reported that their parents "forced" them to join Future City.

For many students in the national sample, it appears that family influence was not likely a major factor in their decision to participate in Future City. More than half **(53%) of the students at the Future City competitions reported they were not related to an engineer**.

Table 5:
Are You Related to an Engineer?

	Frequency	Percent
Yes	922	41.6
No	597	27.0
Don't know	581	26.2
Missing	115	5.2
Total	**2215**	**100.0**

Parents

Among parents in our study, the majority (90%) reported having one child participating in Future City, and another 10% reported having two or more children participating in Future City this year.

We asked parents at the competitions to indicate whether they were involved with their children's Future City group during the year. Slightly more than one-third (n = 225, 37.9%) reported that they had been involved in Future City in one capacity or another. The average number of hours that parents reported

donating to Future City, across all regions, was 14.5 hours (standard deviation = 20.68), with a very wide range from 1 hour to 130 hours. The average hours reported by parent volunteers in each region is provided in the Appendix.

Parents were involved in several ways. The most common ways included providing transportation for the teams and their projects to and from competitions (34%) as well as providing materials or supplies for the projects (25%). We should note that some Future City teams are comprised entirely of homeschooled students, so it is logical that parents are heavily involved with some teams.

More than 16% of parents reported that they helped their children conduct research, write their essays, build their models, or prepare their presentations (we expect that most of these are homeschooled students, but our data do not enable us to confirm this). Another 13% reported that they provided specific direction and guidance to their children throughout the project. Parents helped in indirect ways, too, by offering support and encouragement (13%) or by serving as the mock audience while the teams practiced delivering their presentation (12%).

Table 6:
Types of Parent Involvement
(N = 325)

	Frequency	Percent
Transportation (of children and/or FC project)	110	33.8%
Provide materials/supplies for project	81	24.9%
Participated in project research, writing, model creation, presentation	54	16.6%
Providing direction/guidance	42	12.9%
Support/encouragement	42	12.9%
Presentation practice audience and providing feedback	39	12.0%
Chaperone/supervise team/logistics at presentation	36	11.1%
Use of their home for team meeting place	35	10.8%
Providing food and/or drinks to team	21	6.5%
Help studying/answering questions	19	5.8%
Supervision with or use of power tools	19	5.8%
Shared knowledge/mentored/lectured/taught	14	4.3%
Attendance at competition/presentations	7	2.2%
Rescheduling other activities around FC team sessions	7	2.2%

Mentors

Future City mentors represented a wide range of 16 different engineering fields (Table I-1). The three most frequently represented types were civil engineers (29%), mechanical engineers (13%) and electrical engineers (12%). A number of mentors were not engineers. These included architects, biologists, land surveyors, and chemists, for example.

Future City mentors reported belonging to dozens of different professional engineering societies (Table I-2). The three most frequently reported societies were ASCE (21%), ITE (5%) and local engineering societies (13%).

Mentors reported having an average of 6.28 years (standard deviation = 6.32) of experience working with students, with a range from 0 to 30 years. Mentors reported volunteering as a Future City mentor for an average of 2.56 years (standard deviation = 2.71), with a range from 0 to 17 years. Nearly one-quarter of the mentors reported that they have previously served as Future City judges (n = 59, 22.5%).

We asked mentors about their motivation for volunteering with Future City, given the demands of the position and the reality that most of them currently hold full-time jobs. The most common reason given is that mentors wanted to encourage students' interest in STEM (23%). Fifteen percent volunteered at the behest of a teacher or other Future City participant. It should also be noted that two mentors were actually former Future City students.

Table 7:
Mentor's Motivations for Volunteering

	Frequency	Percent
Encourage children's interest in STEM	57	22.9%
Asked (by teacher, colleague, school, student, parent)	36	14.5%
Enjoy working with students/amazed by their ideas	34	13.7%
Desire to experience mentoring/looking for volunteer opportunity	34	13.7%
Own child/grandchild/sibling is/was a participant	32	12.9%
Enjoy the experience, fun, rewarding	31	12.4%
Previous mentor for FC	25	10.0%
Interest in/Love of the Program	25	10.0%
Wanted to share knowledge (engineering, planning, alternative energy)	20	8.0%
Perceived need (i.e., lack of mentors last year)	20	8.0%
General positive comment	8	3.2%

	Frequency	Percent
Previous involvement as a judge	7	2.8%
Outreach opportunity for graduate fellowship or company or pre-college	5	2.0%
Previous participant (as a student)	2	0.8%

Teachers

The teachers in our study were fairly experienced with Future City. The average teacher had participated in Future City for 3.45 years (sd = 3.30), with a range of 1 to 20 years. Teachers came from a variety of fields. Most Future City teachers were science teachers (41%), Gifted and Talented teachers (37%), technology teachers (19%), or math teachers (18%). However, some social studies (9%) and English teachers were also involved (11%).

Table 8:
Subjects Taught by Teachers

	Frequency	Percent
Science	143	41.2
Gifted and Talented	128	36.9
Technology	66	19.0
Math	63	18.2
English Language Arts	38	11.0
Social studies	31	8.9

Other non-STEM subjects included: religion, foreign languages, library, and art.

School Programs

The schools in which the Future City groups were housed offered a range of engineering or design and build clubs/courses. The most common are listed in the table below:

Table 9:
Most Common Types of Other Engineering Programs Offered at Schools

	Frequency	Percent
Technology education classes	189	54.5
FIRST Lego	80	23.1
Guest engineer speakers	80	23.1
Engineering classes	46	13.3
Project Lead the Way	29	8.4

According to the teachers in our study, the range of the numbers of students participating in Future City this year was very wide—from 0 to 350 students (some teachers started programs, but no students committed to it). The average number of students participating was 20.90 (sd = 30.92), median = 12.0.

As a result of the size of the programs, teachers also reported having a wide range of 0 to 75 Future City teams in their schools. The trimmed average was 2.82 teams (sd = 6.74), median = 2.0 teams.[3] The number of teams from each school that participated in the competition ranged from 0 to 25.[4] The trimmed average was 1.68 (sd = 2.61), median = 1.0.

Approximately one-third of the schools (34%) included gifted and talented students in their Future City programs, while 8% reported including special education students.

Most schools (76%) included 8th graders in their Future City programs this year, while 66% included 7th graders and 40% included 6th graders. A small number of schools (n = 2) reported that they offered Future City to students in lower grades (as early as 3rd grade).

[3] We report the trimmed average, which removes the outliers and enables us to get a more accurate picture of the size of the programs.
[4] Some regions limited the number of teams that could participate in the competition from each school, while others did not.

Table 10:
Grades Included in Programs

	Frequency	Percent
Sixth	140	40.3
Seventh	228	65.7
Eighth	264	76.1
Other: 3rd – 5th graders	2	<1.0

Note: Programs can include more than one grade, so the percents add to more than 100%.

At most schools, Future City was implemented either as a club (n = 181, 52.2%) or as a course (n = 168, 48.4%). In a few cases (n = 22, 6.3%) Future City was offered to students as both a club and a course. Slightly less than half of the teachers (41%) reported that the Future City groups mostly met during school hours, with some hours outside of school. Roughly the same proportion (43%) reported that the Future City groups mostly met outside of school.

Table 11:
When Did Program Meet?

	Frequency	Percent
Mostly during school hours	142	40.9
Mostly after school hours	148	42.7
Equally during and after school	53	15.3

During site visits, we observed many different approaches to the groups. Some groups operate like a class, operating as a single group, driven by the teacher.

In other groups, we observed that the larger group is divided into teams of students. In some cases, each student in a team has a particular role (e.g., "the writer," "the manager, "the builder," etc.).

In other cases, Future City may be offered to an entire grade level, with everyone doing some of the Future City activities and only a handful of students doing the model or the presentation at the competition.

In most schools that we visited, students tended to volunteer to play a role for which they believed they were best suited. According to some teachers and students, this sometimes led to mostly boys being responsible for SIM City and mostly girls being responsible for the essays and narratives. With a few exceptions, we observed this to be mostly true on the days we visited schools.

According to teachers in the Site Visit schools, both girls and boys tended to work equally on model building and presentations.

Teachers estimated the number of hours worked on Future City for the average student who competed in the competition. The range was very wide, from 3 to 300 hours. The trimmed average was 58.50 hours (sd = 298.48), with a median of 50 hours. For students who did not compete in the competition, teachers estimated that their students worked from 1 to 300 hours. The trimmed average was 40.57 hours (sd = 299.60), with a median of 35 hours. Teachers estimated their own time commitment with a range of 3 to 500 hours. The trimmed average was 73.08 hours (sd = 305.66), with a median of 63.0 hours.[5]

Most of the teachers (n = 209, 60.2%) reported that their Future City groups had the support of an engineer mentor. Roughly 14% (n = 50) reported that they had a mentor for part of the year. Only 21% (n = 73) reported that they did not have a mentor at all.

We asked students to report on whether their Future City program was mostly student-driven or mostly adult-driven, or some combination. As summarized in the table below, **most students (62%) reported that their programs were student-driven**. Nearly one-third (28%) reported that adults and students shared the responsibility for design decisions equally. Only 4% of the students reported that their programs were mostly adult-driven. Thus, despite 16% of parents reporting that they were involved with Future City projects, the students themselves perceived their projects to be mostly driven by students and not the adults.

Table 12:
Student-driven versus Adult-driven

	Frequency	Percent
The students in my group mostly made the design decisions	1369	61.8
The students and adults shared the responsibility equally for the design decisions	628	28.4
The adults (teachers and mentors) mostly made the design decisions	83	3.7
Missing	135	6.1
Total	**2215**	**100.0**

[5] We removed two schools that were outliers (one reported 4,500 hours for students and 4,600 hours for teachers and the other reported 1,500 hours for students and teachers).

Findings

This section describes what we learned about Future City's strengths and areas for improvement. Please note that the findings are presented at the national level only. Regional data is available in the Appendix, without analysis or interpretation due to the widely varying sample sizes between the regions.

Future City is Delivering on its Promise of Strengthening Students' 21st Century Skills

When we asked students to report what new knowledge or skills they gained from participating in Future City. The most common response, in students' own words, was "21st Century Skills." These skills included:

- Teamwork
- Writing
- Public speaking
- Time management
- Problem-solving

This section summarizes our findings with respect to how Future City supported 21st Century skill building, with data from students, teachers, parents, and mentors.

Future City Helps Students to Cultivate Teamwork Skills

By design, Future City encourages students to work together as teams to develop solutions to real-world challenges. Based on our discussions with students in Site Visit schools, for some students it appeared the concept of working in teams posed a significant challenge at the outset of the year. Some high achieving students were concerned about working with other students who might be competitive with them or who might not "pull their own weight."

In fact, some students (6%) did report that the process of working with a team was sometimes a challenge for the Future City groups. Students had to learn to work with people who had different opinions or had different work styles.

Despite these challenges, our data revealed that the process of working with a team was one of the most rewarding components of Future City. At the end of the year, students in our national sample mentioned "learning how to work with a

Future City enables students with different skill sets to work together: the writer, the builder, the idea person --Teacher

team" more frequently than any other skill that they learned in Future City. In fact:

- 85% reported that they liked working with their Future City teams and
- 82% reported that Future City helped them to see the value of working with a team to solve problems.

Among the top things that students' reported enjoying about Future City, working with and getting to know new people was one of them. In fact, for some students, Future City provided an opportunity for many students (56%) to "fit in" with other students who had similar interests. Students told us:

- *I learned to work with my classmates cooperatively even if I didn't agree with their ideas.*
- *The thing that I learned was that working with someone is better than alone.*
- *Teamwork is great and without a team you won't get too far in a lot of things.*

Most parents and mentors (90% and 89%, respectively) also reported that Future City enhanced students' ability to work in teams. In fact, the ability to work in teams was the most commonly mentioned factor that parents liked most about Future City.

Teachers provided further evidence that Future City helped to support students' teamwork skills: 84% reported that students' ability to work in teams was enhanced by their participation. Teachers told us:

- *Future City better develops teaming skills reinforcing or communication skills and all the soft skills our business world is seeking in future workers.*
- *Future City is a tremendous learning experience for the students. They learn about working as a team, researching, organizing, planning, time management, etc. They see a long term project start to finish. They do not always like the process, but they are so proud when they finish!*

Future City Helps Students Improve their Writing, Public Speaking, Project Management, and Time Management Skills

I had a student this year from my school whose parent came up to me and said that before this she would have NEVER competed in any form of academic competition. She was the winner of our outstanding presenter award at our regional competition. – Reg Coord

Parents, teachers, and mentors all reported that Future City had a positive impact on students' ability to communicate and manage their time. Three-quarters of teachers (75%) reported observing an improvement in students' oral presentation skills, while roughly the same proportion (74%) reported observing an improvement in students' project management skills as a result of participating in Future City. More than two-thirds (71%) of teachers reported that their students were more comfortable working independently after participating in Future City and two-thirds (66%) reported seeing an improvement in students' research and writing skills.

Parents also reported that Future City helped to enhance their children's research and writing skills (79%), oral presentation skills (80%), and project management skills (83%). Moreover, most parents (84%) also reported that their children became more confident working in a self-directed manner after participating in Future City.

The majority of parents (82.6%) reported that Future City met or exceeded their expectations, with half of those families reporting that Future City "exceeded" their expectations. Only 1.5% of families reported that Future City failed to meet any of their expectations. Most parents reported that they "definitely" or "probably" would recommend Future City to other families (91.6%). Only one family out of 593 families reported that they would not recommend the program.

Comments from teachers and parents include:

- *One student was very excited to be involved because of the video game and the essay and research, but not excited about the model and the presentation. He really prefers to work alone and is not very crafty or good with speaking. In fact, he has some speech issues. In the end, he helped quite a bit on the model and overcame his fears enough to do his part of the presentation. His mom was very pleased that the project motivated him to stretch outside his comfort zone and do things he would not normally seek out on his own. –Teacher*

- *A student that I selected to represent the team and be a presenter was having a hard time at school. She was feeling like she didn't belong and was down. Her mother emailed me after the competition and said that being a Future City presenter gave her confidence, increased her enthusiasm for school and gave her a true a sense of accomplishment. Her mother thanked us again for the tremendous opportunity Future City*

provides and I have personally seen the change in her outlook and class involvement. –Teacher

- *My daughter did not want to present, but she stepped up and presented with confidence. Now she's not scared to present in front of people. – Parent*

- *Our son's public speaking was the most obvious improvement. He spoke with projection, clarity and confidence. –Parent*

Mentors, too, reported seeing positive impacts on students' skills in these areas after participating in Future City. Almost all mentors (86%) reported seeing improvements in students' oral presentation skills after participating in Future City. More than three-quarters (77%) reported seeing improvements in students' project management skills and research and writing skills (81%). And, confirming reports from students and parents, most mentors (76%) also reported seeing improvements in students' comfort level working in a self-directed manner after participating in Future City.

There is no question that Future City places high expectations on students in terms of writing, presenting and meeting deadlines and students are surprising themselves as they rise to the occasion.

When we asked students what surprised them the most about Future City, two of the most common responses were (1) that it was difficult, and (2) that it required a lot of time. However, students also reported that they were surprised at the quality of their own work, their own abilities and how much fun they had working with a team. Among the most commonly mentioned skills that students reported learning during their experience with Future City were:

- public speaking and presentation skills,
- writing and reading skills, and
- time management (Table 13).

Table 13:
Top Ten Things Students Reported they Learned
(N = 1321)

	Frequency	Percent
1. Teamwork/working in a group/cooperation/21st Century Skills	421	31.9%
2. Learned about how to apply renewable energy, electricity and other scientific concepts/power delivery/technology/futuristic science to cities	274	20.7%

3. Engineering/architecture	241	18.2%
4. City planning/city maintenance/infrastructure/bridges(transportation)/zoning	189	14.3%
5. Building models/scale/using tools	154	11.7%
6. Public speaking/presentation skills	104	7.9%
7. Design/design process/problem solving	58	4.4%
8. Creativity	41	3.1%
9. Writing/reading	39	3.0%
10. Time management	34	2.6%

In fact, students told us that they were surprised by the extent to which Future City helped them to develop these skills (Table 14).

Table 14:
Top Ten Things that Most Surprised Students
(N = 901)

	Frequency	Percent
1. Difficulty/amount of work	173	19.2%
2. Quality of own work/winning/own abilities	134	14.9%
3. Working in a group/teamwork was good	78	8.7%
4. Fun/how much they liked it	75	8.3%
5. Time it took/deadlines/time management	67	7.4%
6. Number of people/schools participating/cities entered	51	5.7%
7. The presentation/presenting/public speaking/questions asked	51	5.7%
8. Model building/how many supplies gathered/budget/other people's models	50	5.5%
9. How hard it is to run a city/transportation	44	4.9%
10. SIM City was difficult	37	4.1%

A majority of students (60%) reported that Future City enabled them to use their creative writing skills, and most students (81%) reported that Future City gave them an outlet for their creativity and imagination, despite fewer than half of students (45%) reporting that they enjoyed the essay component of Future City. Most teachers (95%) and mentors (98%) reported that writing the essay was a valuable experience for students.

Nearly three-quarters (73%) of students reported that they found delivering the presentation at the competition to be an enjoyable experience (97% of mentors and 98% of teachers reported this was a valuable experience for students). Two-thirds of students (66%) reported that they found preparing for the presentation to

be enjoyable (97% of mentors and teachers reported this was a valuable experience for students). The same proportion of students (66%) reported that participating in Future City boosted their self-confidence:

- *I improved my outgoingness. I was not very outgoing before this.*
- *My public speaking skills improved from this experience.*

Most students (88%) reported that they enjoyed Competition Day, which is, of course, the culmination of all these components.

Students working together on model building.

Also related to confidence, **the majority of students (81%) reported that Future City taught them that they could create something on their own, without the direction of a teacher.**

Finally, many students (41%) reported that their participation in Future City has helped them in other non-STEM subjects like English-language arts, social studies, history and other subjects.

Future City Teaches Students to Use the Engineering Design Process to Solve Real-world Challenges

The majority of mentors (92%) reported that Future City represents the field of engineering. In order to successfully compete in the competition, students must be able to apply their knowledge of the engineering design process to create their cities.

Among students in our Site Visit sample, we found that the average Future City student started the program with some basic understanding of the engineering design process (Table C-4). According to parents, teachers and students in the national sample, Future City provided an opportunity for students to ability to apply those skills successfully:

I learned how to convert my creativity and imagination into realistic designs and plans.
--Student

- *Future City made my daughter aware of whole systems thinking and applying that to solve problems that happen every day. –Parent*
- *The Future City program brings together analytical and problem solving skills combined with engineering. –Parent*
- *Future City gave my son the chance to solve multiple engineering problems at once. –Parent*
- *I love that the students learn about science, engineering, the design process, research, writing, communicating and presenting. But beyond those basics, the students learn how to make mistakes and try again. –Teacher*
- *Future City meets the goals for my Technology Education curriculum perfectly which includes learning about the engineering design process. The Future City Competition is a great program that brings professionals to work together to help middle school students in learning about engineering and using it to address problems we are facing today. –Teacher*
- *Students had to learn how to collaborate to improve the design through research. Initially I served as facilitator and mediator but after a time students mediated themselves and grew to work in collaboration with respect and tendency to hear others' ideas and suggestions. –Teacher*
- *My technology education standard of students understanding the designed world was supported. The students applied the design principles while model building. –Teacher*
- *I didn't really gain knowledge, but I learned how to improve my problem solving skills through engineering. –Student*
- *I loved combing building and problem solving to make something. –Student*

Most parents (86%), mentors (86%), and teachers (84%) reported that they observed improvements in students' ability to use their problem-solving skills after participating in Future City.

- *Every year I am floored at how well these junior high students understand complex engineering concepts. –Regional Coordinator*

In the Site Visit schools only, we assessed students' ability to apply engineering-related problem-solving skills to real-world problems before they started Future City (fall 2011) and at the end (late winter 2012).[6] Students had the potential to earn 0 to 7 total points on the pre-test and on the post-test. We compared students' scores on the pre-test and post-test surveys at the end of the study.

We found a statistically significant improvement in students' ability to apply engineering design process skills to real-world problems after participating in Future City (controlling for intra-class correlations). The average score on the pre-test was 4.83 (se = .118) while the average score on the post-test was 5.42 (se = .133).[7] This finding illustrates the positive educational impact of the Future City experience on students' ability to apply the design process.

Future City Helps Students Apply Scientific Concepts to Solve Real-world Engineering Challenges

Future City makes the students much more aware of the way science matters in the real world. --Teacher

The #2 most frequently mentioned skill that students reported learning from Future City was how to apply science concepts (specifically related to energy, which was the basis of this year's Future City essay) to the challenge of creating a city (Table 13). In addition, learning about energy and using science to create the cities was also one of the top ten things that students reporting liking most about their Future City experience (Table C-1). Some students reported that they started Future City with some knowledge of alternative energy sources, and that Future City helped them learn how to apply that knowledge. Beyond learning about the science of energy, students learned what factors to take into consideration when choosing an energy source for their cities. Students commented:

- *I learned how different renewable energy sources work and how they can be used in a city.*
- *I learned about the different roles of energy and how to design the infrastructure of the city.*
- *I liked creating the city with my teammates and discovering the potential of science and how science can change the city.*
- *I liked building the model and learning about the different types of energy sources. It actually helped me out a lot in science class.*

[6] We did not assess students' ability to apply math concepts to real-world problems.

[7] $F_{(1, 212.326)} = 23.452$, $p = .000$

Teachers also commented on the ways in which Future City enabled students to apply scientific concepts to real-world problems:

- *Future City is a real-life connection to our science, math, social studies, and ELA curriculum. The Future City competition allows students to explore science and math in a way they don't have the time in the classroom. The research, and infrastructure information, engineering basics, mathematical scales and math in understanding methane energy potential (for example) is something I could facilitate for every student in grade seven. The research essay, city narrative, and presentation writing all serve to prepare our students to go out and achieve.*

- *Future City offers many ways to apply learning from other subjects to a real-life project - science, research skills, writing, math/scale, art, problem-solving, public speaking and many more.*

- *It provided opportunities for the students to be challenged by something out of the ordinary and allowed them to work with their hands and to solve problems in a team based environment.*

During most site visits, we observed students engaging in discussions about a range of complex scientific concepts related to energy. These discussions were not merely superficial, but we observed students posing questions about the concepts, challenging each other's assumptions, and testing their ideas with the group. Examples of the discussion topics included:

- Super-conductivity
- Methane hydrate crystals
- Solar roadways
- Radon gas
- Geothermal
- Wind turbines
- Solar paint
- Algae as biofuel
- Tidal energy
- Hydroelectric
- Lunar energy
- Nanobiotics
- Nuclear fusion
- Nuclear fission
- Pneumatic pods

Future City Helps Students Learn How their Communities Work and Become More Informed Citizens

During our site visits, one of the things that students most commonly discussed was how much they were learning about how municipalities work. At each school, students described how they took what they were learning in Future City and applied it to local issues related to taxes, transportation, zoning, planning, and the like. **Almost all students (85%) in our national sample reported that**

Future City helped them to learn and appreciate everything that goes into planning and maintaining a city and 62% reported that Future City made them more aware of civics issues like politics and taxes.

Teachers told us:

- *During the project, I had students continuously coming to me with concerns about their own neighborhoods as a whole with regards to emergency service proximity to their homes, zoning, and traffic issues. In addition to the improvements covered in the survey, participating students greatly improved their understanding of societal needs and possible consequences for failing to meet these needs.*

- *The Future City Competition teaches students the importance of various jobs needed to build and run a city. The students discover the importance of engineering, from planning reliable transportation, to building structures to withstand natural disasters. Besides engineering, students learn the importance of funding fire protection, police protection, health care, and education. Students also learn the importance of regulating taxes. I heard comments such as, "you need to lower taxes so that more residents will move in," and "raise taxes for dirty industry so that they will go to another city." One of the most rewarding experiences for me is when students use what they've learned to create new forms of technology for the future. After learning about engineering careers, one of my students said he's seriously thinking about engineering as a profession.*

Future City Helps Students to Discover Different Types of Engineering and Explore Career Options

Beyond learning how to apply math, science and problem-solving skills to real-world problems, students reported that Future City helped them to see the value of these concepts as it related their future careers. Across the national sample of Future City students, the majority **(80%) agreed or strongly agreed that Future City had helped them to see that math and science are important to their future**.

Most mentors (91%), parents (87%), and teachers (80%) reported that Future City enhanced students' understanding of the field of engineering. As discussed earlier, it appears that Future City *did not* change students' understanding of how engineers approach problems. For example, based on our Site Visit schools (the only pre-test data we have), it appears that many of the Future City participants

arrived at Future City with some knowledge of engineering already in hand (Table C-6).

Rather, it appears that Future City helped open students' eyes to the possibilities available to them in the field of engineering, both in terms of other engineering-related activities and as a career choice. In fact, more than half of students **(53%) reported that Future City helped them see themselves as engineers someday** and **58% reported that Future City has made them more interested in doing other engineering clubs or activities**.

Ten years ago, one of the Site Visit schools decided to embed Future City into its curriculum because they wanted to focus on 21st Century learning. Today, Future City is completely integrated into the 8th grade curriculum -- the language arts teacher helps with essays and doing research, the social studies teacher contributes knowledge about government and civics, the science teacher talks about environment, land planning, energy and engineering. Since embedding Future City into the curriculum, this school has seen a significant increase in students enrolling in Project Lead the Way, and classes like biomedical engineering in high school.

In fact, a number of teachers and Regional Coordinators shared with us anecdotes about how Future City participants went on to study engineering after their experience:

- *We had a Latino student a couple years ago who was high ability but low achieving. He did Future City and he blossomed. He became a team leader to everyone's surprise. He started to turn in his homework on time and started paying more attention to his schoolwork. This was a student that no one ever thought would succeed, and he was succeeding. After doing Future City, he decided he wanted to be an engineer. –Teacher*

- *There was a young man who lived with his three sisters and father after his mother's passing who was struggling to find his groove in middle school. He needed a bit of direction and found his way into Future City. The program had such an impact on him that he applied to a technical high school which is founded on project based learning and high tech opportunities. The young man graduated last year and is off to college. – Regional Coordinator*

- *We have had many teachers that have been doing the program for 10+ years. I hear from them that their previous students have gone on to college to study in engineering or a science related field. I also hear from many parents how fantastic they feel the program is and how excited they are for their child to want to study engineering. – Regional Coordinator*

- *Students became aware and educated about engineering and careers in this field. They learned about interrelationships in engineering, math, politics, and impacts of cause and effect in the virtual design. This project used student mentoring of 8th, 7th, & 6th grade students for empowering students and grooming younger ones in scientific conservations and relationships. –Teacher*

Students Found Future City to Be Challenging but Rewarding

Most of the students (n = 1470, 66.4%) reported that they would join Future City again, if they had the chance. Almost one-quarter (n = 513, 23.2%) said the "might" join again, while only 5.5% (n = 121) students reported that they would not join Future City again if they had the chance.

During site visits, we heard stories about how many hours the students dedicated to working on Future City – including a significant amount of evening, weekend, and holiday time. The reader may recall that, according to teachers, the average Future City student spends roughly 40-58 hours working on the program, while some spend many more than that.

In addition, teachers and students told us about how the students spend time raising funds so that their fellow Future City members can attend and support the competition teams.

- *I quit band so I could do this this year. I thought it would be fun. – Student*

- *We knew we were going to do Future City this year, so we started early (last summer). – Student*

Students collect recyclables from school and home for their models.

Parents also play a pivotal role in supporting students' dedication to Future City. Parents often need to drive their students to school early or pick them up hours after school has ended so that the students can continue working on their projects.

- *One day last year, some of the students stayed until midnight in a snowstorm. The parents actually let the students stay there at the school and work on their Future City project together. –Teacher*

- *Sometimes students call me over the winter break because they want me to come in and work on the models. They are willing to work in their free time to finish the models. –Teacher*

Moreover, based on the experience of Site Visit schools, it appears that most groups do the bulk of the model building during winter break. According to teachers and students, it is not uncommon for students to have sleepovers during the break so that they can work on their models. Since the models are typically stored at people's homes, it is perhaps not surprising that most of the work takes place outside of school for many programs.

- *The students are extremely dedicated -- starting at 6:30 in the morning and working until 7pm. Some have even stayed until midnight. –Teacher*

During one site visit, after school had ended, a teacher encouraged the students to stop working and eat some dinner (which he made and warmed in a crockpot). Last year, 22 students met the day after Thanksgiving to work on their models. This same teacher was able to get a turkey donated and they had lunch together.

Some Future City Students Stay Involved in Future City after Middle School

During several site visits and in many surveys, Future City participants shared stories about former Future City students who had moved on from middle school, only to return again to Future City as a volunteer. We met with one such high school student during a site visit:

In middle school, she was an artist when she found Future City. At the time, she thought engineering was boring, and she floated from group to group, not feeling like she really fit in. After her experience with Future City, she wants to be an industrial engineer, and her friends feel the same. She loved the Future City experience and now she comes, on her own time, and helps the middle school Future City girls (all-girl team) after school.

High school student, and former Future City participant, explaining scale to students.

Regional Coordinators also shared the following anecdotes:

- *I know some high school students that volunteered as co-mentors with the program have. Many students have continued to be engaged in engineering events after Future Cities.*

- *Our region has not been around long enough for any of the students to have graduated college yet however I was contacted by an engineering student at a local university. He participated in the program when he was in junior high and was interested in helping out this year.*

It would be informative to follow a sample of Future City students over time to see whether they stay engaged in engineering and in what activities they participate in high school and beyond.

Mentors Have a Positive Impact on Future City Students, Find the Future City Resources to be Valuable, and More Mentors are Needed

Mentors demonstrated a significant commitment to Future City, often working full-time as professional engineers while still making the time to support one or more local Future City programs. The mentors in our sample reported that they spent an average of 40.60 hours working on Future City this year (sd = 34.911) and responses ranged from 0 to 240 hours.

As summarized in the table below, 53% of students reported that their mentors helped them to see themselves as engineers someday, 81% reported that their mentors helped them understand what engineers do in their careers, and 79% reported that their mentors were important in guiding them on the Future City projects.

Table 15:
Impact of Mentors, from Student Perspective (N = 1779)

My Future City mentor (the engineer)…		Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree	Total
…helped me to see myself as an engineer someday."	Number	453	490	508	203	67	1721
	Percent	25.5	27.5	28.6	11.4	3.8	96.7
…explained what s/he does in his job."	Number	853	595	183	67	18	1716
	Percent	47.9	33.4	15.5	3.8	1.0	96.5
…was important in guiding us on the project."	Number	915	496	214	62	28	1715
	Percent	51.4	27.9	12.0	5.3	1.6	96.4

97% of mentors reported that they would recommend Future City to a colleague.

Despite the significant time commitments they made, 88% of mentors reported that Future City met or exceeded their expectations. Almost every mentor surveyed (n = 254, 97%) reported that they would recommend Future City to a colleague.

Regarding the tools and resources that Future City provides, most mentors had positive perceptions of all the Future City components. Below, we list the components and the proportion of mentors who reported the components were valuable parts of the Future City experience:

- Working in a team, 100%
- Working with a mentor, 100%
- Building a model, 98%
- The competition, 98%
- The essay, 98%
- Delivering a presentation, 97%
- Preparing a presentation, 97%
- Designing a city in SIM City, 86%

Regarding newly developed or newly revised resources, most mentors also reported that these were helpful, too. Below, we list the resources along with the proportion of mentors who reported the resources were valuable to them and the students with whom they worked:

- The new FutureCity.org website, 82%

- The new handbook, 81%
- The new Learning Blocks, 73%
- The new online calendar program, 72%

A mentor working with students.

While mentors are a very important component of Future City, more mentors are needed. Nearly two-thirds of teachers (60%) reported that they had a consistent engineer mentor this year. Teachers reported:

The engineer mentor is key to opening up the world of engineering for the students. More volunteers are needed. --Teacher

- *All the engineers I know are extremely busy and did not have time to devote, especially during the work day when the students could meet.*

- *Our mentors were challenged to work with more than one team, working at the school as one group and individually with the teams at their homes and over the breaks. It was difficult to contact local organization to get mentors to participate in the program because it was done before and after school.*

Many other teachers told us that they have experienced difficulty finding a mentor or, in some cases, keeping a mentor engaged. This most common reason for difficulty with mentors, according to teachers, has been the issue of mentors not having enough time to meet with the students or school and mentor schedules not matching up well (reported by most of those teachers who reported having trouble with their mentor). Teachers told us:

- *We also have a hard time getting access to an engineer as our meetings take place during day and models are built at home.*

- *With three teams, we only have one mentor available for 2 hours each week. It was not enough.*

- *Hopefully next year will be better with better planning on my part and he won't be in a new job (as he was this year) so he will hopefully be able to show his employer the value of helping students during work hours!!*

Regional Coordinators offered the following suggestions for recruiting mentors:

- *(The national office should) Engage more engineering firms and agencies to encourage staff to mentor for Future City.*

- *Use more marketing (at the national level) to get mentors to volunteer.*

Regional Coordinators are Deeply Committed to Future City and Need Additional Supports

Of the 27 Regional Coordinators who responded to our survey, only 7 are paid positions. So, 74% of the Regional Coordinators are volunteers who are unpaid, despite the significant time commitment required by the position. We asked Regional Coordinators to tell us about their motivation for taking on such a challenging role. They reported that the rewards they reap from participating in Future City include:

- Being able to teach students about STEM
- Helping students to develop their 21st Century skills
- Helping engineering and educational organizations to meet their goals of engaging students in STEM learning
- The opportunity to provide outreach to traditionally underserved communities
- The chance to network and meet other volunteers
- The feeling that they are able to "give back" to their community

Regional Coordinators told us:

- *I believe we are stewards for our children and their future. I believe it is our duty as adults to provide opportunities for students to experience as many careers as possible while they're young, at the same time, challenging them with to improve basic skills (research, problem solving, written and verbal communication). Future City is a very targeted program that provides students a chance for a multitude of these experiences.*

- *I believe in what Future City is all about - providing students with an opportunity to learn about engineering in a hands-on project that is real-*

world. I enjoy the professional people I work with and most of all connecting with the students.

- *I think it is a worthwhile program and the students benefit from it, especially in areas where most schools that participate are very low income and have very few professional role models in their daily lives.*

Regional Coordinators reported that fundraising is one of the most difficult parts of their job. They reported that they need more support from the national office--especially in securing funding from national professional engineering societies.

- *We have a great program but aren't connecting with as many sponsors as I would like.*
- *The national office does a pretty good job and it is understandable that there are limits, but it would be better if there was more support nationally with fundraising, especially in cases where national corporations have headquarters in your region. Finding a national sponsor that donated an annual sum that could then be divided among the regions would be beneficial.*

School recruitment has also been a significant challenge for some regions. Regional Coordinators offered the following suggestions for enhancing school recruitment efforts:

- *Provide branded graphics that can be used in our programs, signs, etc. (the little robot dude, the city elements, etc. found on the national site).*

- *Coordinate national advertisement perhaps. I find the creation of awareness to be the most difficult part for now.*

- *Need to present at conferences where the teachers not yet involved are in attendance so we can get them interested and not intimidated.*

- *A quarterly newsletter sent out to all Future City alumni - MathCOUNTS has something like this - this can keep folks engaged and spreading the word for Future City for decades!*

- *There needs to be more of a push to "advertise" to the Educational World thru the many publications that are currently published at the regional and national level.*

Both teachers and Regional Coordinators raised the issue of school recruitment. For instance, there are some regions that are very rural or simply do not have a

lot of school participation. Teachers see the value in including more schools in the competitions. One teacher commented:

- *It would be great to have the resources to help recruit teachers from other schools to add more students to the program. Perhaps offering teachers scholarships and clock hours for ongoing PD to attend the competition? And experienced coaches and mentors can hold a 2 hour training to help the recruits get their head around how to manage this program in their own school?*

In addition to help with fundraising and school recruitment, Regional Coordinators identified other supports that would help them in their positions, including software, training, resources, tutorials, a document management system, a competition management system, and more volunteer help:

- *Provide me with some free software and training to make all my photos small enough for the website. Also individualized training to update my website. The pics have kind of stumped me and then I run out of time.*

- *Keep adding more resources and tutorials. We need a good and reliable document management system.*

- *Each region is a little different and would be great to share ideas and if possible resources developed. I miss the shared national drive with documents.*

- *I need to find more volunteers to spread the workload.*

- *Competition Management System - roll this puppy out to everyone! This is a great time saver for the coordinators.*

We asked Regional Coordinators to rate the value of some of the newly developed Future City resources. They reported that the Program Guide and the revised Future City website were the most valuable resources to them. Below, we report the proportion of Regional Coordinators who reported that each of the following resources was valuable:

- Program Guide, 84%
- The new FutureCity.org website, 74%
- The new Learning Blocks, 59%
- Brochures, 48%
- Posters, 26%

Teachers are Enthusiastic and Dedicated Participants in Future City

Teachers dedicate many long hours to Future City each year. Despite the incredible time commitments they made, 76% of teachers reported that the program met or exceeded their expectations. Almost all the teachers we surveys (n = 317, 91%) indicated that they would recommend Future City to a colleague.

Teachers also gave high marks to each of the Future City components in terms of the value each one brought to the Future City experience. Below, we summarize the proportion of teachers who perceived each Future City component as valuable:

- Building a model, 99%
- Delivering a presentation, 98%
- Working in a team, 98%
- The competition, 97%
- The essay, 95%
- Preparing a presentation, 97%
- Working with a mentor, 88%
- The new handbook, 88%
- The new Learning Blocks, 85%
- Designing a city in SIM City, 81%
- The new FutureCity.org website, 77%
- The new online calendar program, 64%

Below, we will discuss some of the challenges that participants have faced with the new Future City resources.

Future City Needs to Build Awareness of the Learning Blocks, Especially Among New Future City Teachers

About one-third of the schools in our sample (n = 116, 33.4%) reported that they used the new Learning Blocks this year. Among the teachers who used them, 91% (n = 106) reported that the Learning Blocks helped them to teach science concepts related to engineering. Almost all teachers who used the Learning Blocks (n = 113, 98%) reported that the Learning Blocks helped their students with the Future City components.

- *The Learning Blocks have been so helpful to me as a new teacher. They've helped me figure out what to do with the students every day. – Teacher*

Half of the teachers in our sample (48.7%) reported that they had never heard of the Learning Blocks. An additional 40.1% reported that they did not use them because they found them to be too basic, too difficult to use, or that they had no time to incorporate them. Teachers told us:

- *We had students who already knew much of what is covered by the learning blocks.*
- *They seemed a bit basic and not as informative as the rubric.*
- *We discussed but they students learned most of the information without the use of the learning blocks*
- *I would say they were good introductions to the concepts but the real learning happened when working on the actual project.*
- *Some of the learning blocks were confusing to use and teach.*
- *The learning blocks did not make sense.*

Others reported that the Learning Blocks did not support Future City clubs held outside of school and that they might be more useful in a classroom setting.

- *They appeared to be designed for classroom use where teachers would have more time to implement it. We had to focus on getting each piece done on time.*
- *Does not work with the club approach we take.*

Teachers Would Like More Resources and Better Communication

Teachers shared the following comments about difficulties with communication they have experience this year, including misinformation on the regional websites, lack of clarity in rules, lack of information about resources, and challenges communicating directly with the regions:

- *There was false information on the website about where the actual regional competition was going to be held.*
- *There was unclear instructions re:the budget, so that our team was deducted for over-spending when in fact they did not exceed $100 of actual costs.*

- *Personal contact with a person to call and speak with new participants about this project. Half my e-mails weren't even responded to.*

Teachers requested the following resources to help support them in their roles as Future City leaders:

Webinars

- *Provide a Future City webinar orientation for new teachers and mentors.*
- *Webinar on SimCity please, in the beginning for mentor teachers!*
- *An overview webinar would be nice.*

Teacher Mentors

- *Perhaps a teacher mentor for new teachers. Now that I have done this one year, I love it. It was very frustrating and confusing to deal with without any experience and knowledge. I was unable to attend the workshops because I am at a private school and was unable to get out of school for the workshops.*
- *Perhaps you could pair a new teacher with a veteran teacher or judge (from a different region) to provide some guidance.*

Information on Engineering Careers

- *Videos, seminars, access to more learning specific to engineering...focus videos on businesses OR on types of engineers.*
- *I would love to see a site with video stories about different kinds of engineers. I could use them in other STEM activities after the competition is over.*
- *I would like to see a part of the handbook that specifically lists the types of engineering and what they do so it would be easier to explain to my students that there are many different types of engineers.*

Engineer Mentor Bank

- *A list of engineers in our city that we could contact, as opposed to waiting for someone to make the contacts for us.*
- *Local Rotary associations or maybe local business organizations could provide lists of people in the engineering field that would be willing to work with students.*

General Resources

- *I use a lot of short videos (5 to 10 minutes or so) to introduce new engineering ideas. Links to some good ones would be helpful.*
- *More sources for the learning blocks, such as better directions and supplemental materials and assessments would be helpful.*
- *I would like information on how to keep students motivated over the long haul.*
- *Team progress tracking charts.*
- *More help on curriculum development for application in a course environment.*
- *More age appropriate resources for the essay topics would be very helpful.*
- *Provide a workshop on model-building for the students.*

Technology Limitations Have Been an Obstacle for Some Schools

Many Schools Struggled to Load and Run SimCity

Among the teachers who were able to use SimCity, 81% reported that it was a valuable part of the Future City experience. However, a number of schools reported that it was difficult getting the simulation software loaded and operational. For others, it was difficult to learn the program and many teachers resorted to assigning one or two students to the SimCity activity, while the rest of the students worked on the other components (see the discussion in the following section about the lack of connection between SimCity and the other Future City components).

In fact, we observed this behavior during many of the site visits. In most schools, a small team (2-3 students, usually boys who were familiar with SimCity) was assigned to work on the simulation, while the other students worked separately on other tasks. When we asked students how students were assigned to work on SimCity, they typically told us, “I already knew how to use it, so I volunteered to do it.” Teachers also told us that, in some cases, they assigned students with previous experience to SimCity so that they could get the task completed before the deadline. Several of the teachers we observed were unfamiliar with or

uncomfortable with using SimCity themselves and admitted that they could not provide technical support for their students when problem arose.

Many teachers responding to the surveys told us that they had technical problems with the software and that, in some cases, they could not use it at all and failed to compete in the competition because of the technical problems with SimCity:

- *Each year, SimCity proves the most frustrating part for the team. We cannot work on it at school, so we usually depend on one or two students to try to come up with something on their own. Also, for whatever reason, I find fewer and fewer students each year who "have a clue" about how to use the SimCity program. It used to be that at least a few students knew of it and/or were at least interested in learning it. Lately, it has become more of an "Oh no -- we have to do SimCity. Why can't we just start researching and building OUR city?"*

- *We had difficulty with the Mac version of SimCity so the students did not have the full range of region choices that I think were available to students using PCs.*

- *SimCity is a HUGE problem for our students. We don't have enough time in class to work on it and many of the students don't have enough computer access at home to play it. I was surprised with how many parents and students could not download the game or the specified region. This is the area we have the most problems with since it has to be done completely at home.*

Other teachers argued that SimCity was not useful to their groups because the software is outdated and does not reflect the futuristic nature of the Future City program:

- *As the simulation is a bit dated, the newest energy sources are not available.*

- *They could not incorporate their selected alternative fuel source into their SimCity; for the most part they never saw the real impact of their choices. I think it was very challenging to use SimCity as a template for the model because of the latter's duel emphasis on futuristic design and alternative energy.*

- *The SimCity is not a realistic tool for city design. It is also weighted too heavily in the competition.*

Some Regional Websites were Difficult for Teachers to Use

Some teachers reported that they could not access forms or documents available on their Regional websites:

- *Streamline the website and improve its navigation. In essence, make it much more like the national website.*
- *The former regional website had a lot more info than the current regional website.*
- *Tough to use the new regional site. Needed resources are too nested, hard to find.*

Some Schools Do Not Have Access to YouTube

At many schools, access to websites such as YouTube was blocked. So, several teachers reported that they were unable to access the Future City resources that are only available as YouTube videos.

A Better Bridge is Needed between the Simulation and the Essay and Model

One-third (32.5%) of teachers reported that there was little to no connection between SimCity and the other Future City components. As described above, schools experienced so many technical problems using SimCity, that some programs resorted to assigning one or two students to work on it (contrary to the teamwork model promoted by Future City). Thus, for many schools the simulation component often became disconnected from the team's work. Many experienced teachers reported they have come to treat it as a standalone piece, just to meet the expectations for that piece of the competition.

Teachers told us:

- *I know for teachers new to Future City there is always confusion on SimCity's connection to the MODEL. You start out thinking that - somehow - the SimCity design is supposed to look like the model, but then can't figure out any way to do that if you have a city that's a space city or underwater city, etc. It might be a good idea to have a really loud and clear statement somewhere in the guidebook to say that the SimCity design is not what the students then have to build as their model.*
- *The SimCity work is more isolated. Since only a limited number of students from each team were heavily involved in the SimCity design it*

seemed harder to make connections from it to the essay and the model. The essay and model were nicely connected though.

More Transparency is Needed Related to Judging and Scoring

Following technology, another major problem identified by teachers and Regional Coordinators was the issue of judging and scoring. Several teachers commented on the lack of transparency and feedback with respect to scores.

- *There are two issues: one, there is a team that wins the contest each year, and is very discouraging to everyone. Second, I still cannot understand what the judges are looking for. If we are meeting and exceeding all of the rubric items, why are we not placing or receiving awards? We need to see the judges' scores.*

- *Please provide a better judging feedback mechanism. My students wanted to know how they were scored on ALL of the various questions of the rubrics. But all we received were the total scores... The students need COMMENTS and FEEDBACK more than a single numeric score. It would really help the students if they could read or hear some comments from the judges about their work, their model and especially their presentation.*

- *We'd like to get scores back in all areas. Possibly 30 days after submission.*

- *Have our projects submitted be "blind" to the judges, so that they do not know where the students are from.*

Other Issues of Equity and Fairness

Many teachers commented on the perceived unfairness of presenting awards to the 3 presenters from each winning team rather than providing some recognition to the whole team.

- *I rated the presentation piece lower because only three of the team member actually present. I am always a little resentful of that. Those three students revel in the limelight but often they are not the ones who did all the work. They could not do their piece without the hard work of the other teammates.*

- *Having a team of presenters is great, but other students contribute a lot and receive no official recognition.*

- *Re-evaluate the recognition given to all team members, if more than three are on a team. Either give them all participation certificates, or give them all medals, but just giving three medals is hard on the team when all have worked equally hard.*

In addition, many teachers recommended that the rules should be changed to allow more than one team from each school to make it to the Top 5.

- *Do NOT keep the rule that two teams competing from the same school cannot compete in the final round of regional competition. When each team works independently, it is incredibly unfair that their scores do not count equally when both teams are successful. Either make all competitors equal, or only allow one team per school.*

- *My suggestion is that a fourth and fifth place be recognized at the regional competition, with a ribbon or certificate. I am suggesting this because, in two different years, I had teams score high enough to make 3rd (recognized as 4th because another team from my school made the finals) and 4th place. Other teams were awarded special awards but their overall score was much lower than the team that came in 4th. Consequently, the team with the higher overall score, because they did not win a special award, left the competition in tears. Because we are dealing with children, I believe a small gesture such as a ribbon will encourage students to participate in such a worthwhile program.*

Timing and Deadlines are Problematic for Some Regions

Teachers told us that they need information from Future City well in advance of the deadlines. They also told us that it was highly disruptive to have some deadlines or competition dates moved this year or to find inconsistent information about deadlines on the various websites.

- *To integrate Future City into my curriculum, I need to prepare during August. I need the full essay information and the starter regions for SimCity by August 1st. I need engineer mentors for each team to start in September. This is a huge time commitment, and the more prep time I have the smoother it will run, and the students will learn more.*

- *The email reminders about what to expect at competition and all handbooks and documents really need to be on the site by August.*

- *It would be very helpful to see information about the upcoming national competition on your website starting in September -- make the dates of Nationals easy to find.*

- *It would be nice to have the dates for everything laid out well ahead of time so there is a clear time line as opposed to a soft line on which students are building and creating.*

- *The due dates and information on the main Future City website for our region did not match the actual dates and instructions for our local competition.*

- *The regional contest date was inaccurate on the local website.*

- *Regional website provided little to no information on deadlines.*

- *The overlapping time frames are so general that they are not very helpful when it comes to day-to-day planning.*

- *The due dates were changed at the last minute messing up our schedule.*

Competition Day Suggestions

Many teachers, students, and parents complained that the competition days are simply too long. Teachers told us:

- *The day is quite long, especially for junior high students. Adding some hand-ons activities provided by different engineering fields would help the "longness" of the day.*

- *The competition day is very long for the students. I would investigate making the process more efficient. Perhaps having the students arrive at different times and incorporate a break for those who arrive early?*

- *Make the speaker's presentation & the groups' presentation more interactive for the others that are there. This is WAY too long for young people to sit! It's too long for me to sit!*

- *My primary suggestion would be to streamline the awards process somehow. That time from the end of the judging until the final awards were presented was far too long. It was good to see the final presentations, but perhaps recognizing every team for the door prizes could be excluded.*

Finally, some teachers and parent made recommendations about food, seating, and gifts:

- *In addition to some of the frisbees and toys given in the grab bag at regionals, perhaps have something with a bit more of an "engineering" flavor to it. Perhaps a CD or DVD with a program or game on it? Inexpensive calipers? Engineering quick reference card? A mathematical toy? A brain teaser? –Teacher*

- *The competition was uncomfortable. There were no places to sit. It was crowded and very muggy. –Teacher*

- *It would also be nice to have healthier snacks available instead of all the sweets in the morning. –Teacher*

- *Also, a minor issue, but 3 of the 5 students I brought are vegetarians, so they had no lunch option. –Teacher*

- *Please provide food for families/observers! –Parent*

- *Provide an area for families as they spend their whole day at the event. –Parent*

Suggestions for the National Future City Office

According to most Regional Coordinators surveyed, the National Future City office is responsive and engaged. Regional Coordinators told us:

- *You guys do an outstanding job. I work with a ton of outside agencies and you are the most responsive group of them all.*

- *National Office is doing a great job, and the conference calls help out too.*

- *Building database structures that help to maintain the information needed like the ones currently being developed. Not everyone has good organizing skills and taking over from one coordinator to another can be a challenge. While all regions operate differently a general guide for coordinators would help in grasping the scale of the project.*

- *I am very pleased with all the efforts of the national office.*

- *They are good at answering questions quickly.*

Some Regional Coordinators offered the following suggestions to enhance the regional experience of working with the national office:

- The national office should clearly define processes and procedures, but let the regions decide the best ways to implement these locally.

- Regional offices appreciated the chance to share feedback with the national office and would like the national office to continue to solicit more input into decisions about how the Future City program operates, especially regarding activities that the regions will have to implement later.

- The national office should consider ways to connect Future City with other engineering programs so that students can stay on the engineering pathway.

- Regions would like to receive a regular update (bi-weekly) from the national office about what information is needed from the national office.

Summary and Recommendations

Summary

Future City, in existence since 1992, is "a national, project-based learning experience where students in 6th, 7th, and 8th grade imagine, design, and build cities of the future." Students participate in teams to create student-directed projects, facilitated by teachers and supported by engineer mentors. As this evaluation shows, Future City offers an opportunity for students to learn about how to apply engineering design process skills to solve real-world problems. Moreover, Future City is delivering on its promise to help students learn 21st Century skills such as developing their creative writing, public speaking, and time management skills. Future City also provides an opportunity for students to cultivate strong teamwork skills and to develop greater confidence.

Participating in Future City requires long hours, hard work, and dedication from all of its participants, including students, teachers, mentors, Regional Coordinators, and parents. But, the resounding message we heard from participants was that the program is rewarding and that the hard work and commitment are worth the effort.

Students who participated in Future City reported that their mentors helped them see the possibilities of working in an engineering-related role someday. Teachers and mentors shared anecdotes about former Future City students who were inspired by their Future City experience to join more engineering-related clubs, take engineering courses in high school or college, and pursue a career in an engineering-related field. Beyond engineering, students, parents, and teachers reported that Future City helped students become more aware of city planning and helped them become more informed citizens about issues such as energy, taxes, politics, zoning and other issues that affected their local communities.

The resources offered by Future City are extensive and perceived as highly essential to the operation of the Future City programs by teachers, mentors and students. However, Future City does need to create a better bridge between the SimCity simulation tool and the other components. Technological obstacles prevented some schools from being able to take full advantage of the resources and communication around timelines also posed a challenge for some schools. Schools would also like to see more transparency with respect to judging and offered some suggestions for ways to enhance the Future City competition.

Below, we provide a list of suggestions for enhancing the Future City program and its resources.

Recommended Enhancements

Recruitment of Mentors and Schools

- Consider using national resources to identify mentors through large national corporations and create a national database of mentors that teachers and regions can access.

- Consider offering alternative ways for mentors to be involved (i.e., remotely, via social networking tools).

- Streamline the registration process for teachers so that it does not discourage them from continuing with the program.

- Create an alumni newsletter to keep alive the interest in Future City and possibly recruit former students who go on to become teachers or engineers someday.

Information on Engineering Careers

- Include more information about engineering careers in the Future City materials (e.g., the website) and at competitions (such as seminars that could be offered to students while they are waiting to present).

Fundraising Assistance

- Consider assisting the regions with national fundraising efforts (e.g., find a national sponsor and divide the funds across the regions).

- Provide branded graphics that can be used in regional fundraising materials.

SimCity

- We understand that in 2013-2014 SimCity will be offered as an online (cloud-based) multi-player resource. This should help to alleviate many of the technical problems reported here. In the meantime, for the 2012-2013 school year, Future City should strongly consider reducing or eliminating the number of points awarded to teams for the SimCity component.

- To better integrate SimCity with the other Future City components, Future City should provide written guidelines or other resources to help (new)

teachers to understand how to connect the different components. Many of the problems connecting the components seemed to stem from a basic lack of understanding of how the simulation did or did not fit into the overall project. Other problems connecting the components stemmed from limitations in the software which will hopefully be addressed in the new release.

Additional Resources for Teachers and Regional Coordinators

- Consider developing additional training and tutorials for Regional Coordinators and teachers. Seek input from these audiences to determine which resources they need the most each year.
- Make the competition management system widely available to all regions.
- Since the Future City posters seem to be of limited value to Regional Coordinators, consider dropping them.
- Build greater awareness of the Learning Blocks, especially among new teachers.
- Consider providing teacher mentors (seasoned teachers who would be willing to work with and mentor teachers in other regions) for new teachers.
- For schools that are interested in integrating Future City into their curriculum, provide support and guidance.

Improving Transparency in Judging

- Provide scores in a timely manner to teams (within 30 days).
- Institute “blind judging” of as many components as possible to reduce the trend of legacy teams winning repeatedly.
- Consider allowing more than one team per school to compete in the Top 5.
- Consider providing some form of recognition for other team members (beyond the 3 presenters).

Communication

- Provide information to schools and regions as early as possible. Consider making the schedule final by spring of the preceding year.

- Keep timelines consistent and do not change them unless there is a weather emergency.

Competition Day

- Add some hands-on activities to competition day to keep students occupied.

- Consider staggering arrival times for students.

- Consider ways to make the speaker presentations more interactive.

- Streamline the awards process, perhaps by sending door prizes to schools rather than awarding them on competition day.

Suggestions for the National Office

- The national office should clearly define processes and procedures, but let the regions decide the best ways to implement these locally.

- Regional offices appreciated the chance to share feedback with the national office and would like the national office to continue to solicit more input into decisions about how the Future City program operates, especially regarding activities that the regions will have to implement later.

- The national office should consider ways to connect Future City with other engineering programs so that students can stay on the engineering pathway.

- Regions would like to receive a regular update (bi-weekly) from the national office about what information is needed from the national office.

Future Research

Throughout our site visits and in analyzing the survey data, we repeatedly heard assertions that Future City is best delivered as part of a curriculum. We

recommend that if Future City decides to undertake research studies in the future that it consider a carefully controlled experiment to examine whether there is a greater impact on students when Future City is delivered as part of the curriculum versus in a club setting.

It would also be informative to follow a sample of Future City students over time to see whether they stay engaged in engineering and in what activities they participate in high school and beyond.

Appendix A: Student Pre-test and Post-test Surveys, Site Visit Sample

Future City Student Survey #1

Future City has developed this survey to see how much the Future City program can help students learn. We are not interested in testing you, but want to test the impact of the program. Students may not know all the answers. That's OK. Please do your best. Thank you.

***1. Name**

***2. School**

3. Below are some sentences about you. Please tell us how much you agree or disagree:

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
I am good at building things.	◯	◯	◯	◯	◯
I am good at designing things.	◯	◯	◯	◯	◯
I am good at solving problems.	◯	◯	◯	◯	◯
I am good at brainstorming (thinking of ideas).	◯	◯	◯	◯	◯

4. Please tell us how much you agree or disagree with each sentence below:

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
When working on a project, it's better to work with a team of people than work alone.	◯	◯	◯	◯	◯
When working on a project, it's better to work with people who are similar than to work with people who come from different backgrounds (gender, age, race, disability, where they live).	◯	◯	◯	◯	◯

5. Carlos is a civil engineer for a company contracted by the city to design a better system for transporting people to different locations. His challenge is to develop a quicker and safer method than is currently used for moving citizens. Please describe the steps in the design process that Carlos would follow to meet this challenge:

6. Name one thing an engineer has designed that is an important part of your life.

Future City Student Survey #1

7. City officials, and those who work with them like engineers, must evaluate many factors when changing city infrastructure. If you were a city official considering a switch to alternative energy resources for electrical power, what 3 issues/factors would you be discussing with others?

#1

#2

#3

8. Please tell us how much you agree or disagree with each sentence below:

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
Engineers FIRST find out what people need and THEN they design and create things to fill those needs.	◯	◯	◯	◯	◯
Engineers usually stick with one design idea, rather than trying out lots of possible ideas.	◯	◯	◯	◯	◯
Engineers figure out the best materials to use and how to turn them into the things we use every day.	◯	◯	◯	◯	◯

9. What made you decide to join Future City?

10. How many times have you participated in Future City?

- ◯ This is my 1st time.
- ◯ This is my 2nd time.
- ◯ This is my 3rd time.

11. Which of the following engineering programs do you do? (Choose all that apply)

- ☐ Future City only
- ☐ FIRST LEGO League
- ☐ Project Lead the Way
- ☐ Engineering classes
- ☐ Technology education classes
- ☐ Other (please specify)

Future City Student Survey #1

12. Are you related to an engineer?

- ◯ Yes
- ◯ No
- ◯ I don't know

13. Are you a...

- ◯ Boy
- ◯ Girl

14. How old are you? (Round up to whole years, please)

15. What grade are you in?

16. Which of the following best describes you? (Choose all that apply)

- ☐ White
- ☐ Hispanic
- ☐ Black
- ☐ Asian
- ☐ Other (please specify)

Future City Student Survey #2

Future City has developed this survey to see how much the Future City program can help students learn. We are not interested in testing you, but want to test the impact of the program. Students may not know all the answers. That's OK. Please do your best. Thank you.

***Name**

***School**

Below are some sentences about you. Please tell us how much you agree or disagree:

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
I am good at building things.	◯	◯	◯	◯	◯
I am good at designing things.	◯	◯	◯	◯	◯
I am good at solving problems.	◯	◯	◯	◯	◯
I am good at brainstorming (thinking of ideas).	◯	◯	◯	◯	◯

Please tell us how much you agree or disagree with each sentence below:

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
When working on a project, it's better to work with a team of people than work alone.	◯	◯	◯	◯	◯
When working on a project, it's better to work with people who are similar than to work with people who come from different backgrounds (gender, age, race, disability, where they live).	◯	◯	◯	◯	◯

Carlos is a civil engineer for a company contracted by the city to design a better system for transporting people to different locations. His challenge is to develop a quicker and safer method than is currently used for moving citizens. Please describe the steps in the design process that Carlos would follow to meet this challenge:

Name one thing an engineer has designed that is an important part of your life.

Future City Student Survey #2

City officials, and those who work with them like engineers, must evaluate many factors when changing city infrastructure. If you were a city official considering a switch to alternative energy resources for electrical power, what 3 issues/factors would you be discussing with others?

#1

#2

#3

Please tell us how much you agree or disagree with each sentence below:

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
Engineers FIRST find out what people need and THEN they design and create things to fill those needs.	◯	◯	◯	◯	◯
Engineers usually stick with one design idea, rather than trying out lots of possible ideas.	◯	◯	◯	◯	◯
Engineers figure out the best materials to use and how to turn them into the things we use every day.	◯	◯	◯	◯	◯

Please tell us about your experience with Future City by telling us what you thought of each part of Future City:

	I Loved It	I Liked It	In the Middle	I Didn't Like It Much	I Didn't Like It at All	I Didn't Do This (Yet)
Designing a city in SIM City	◯	◯	◯	◯	◯	◯
The essay	◯	◯	◯	◯	◯	◯
Building a model	◯	◯	◯	◯	◯	◯
Working in a team	◯	◯	◯	◯	◯	◯
Working with an engineer	◯	◯	◯	◯	◯	◯
Preparing a presentation	◯	◯	◯	◯	◯	◯
Delivering the presentation	◯	◯	◯	◯	◯	◯
The competition	◯	◯	◯	◯	◯	◯

What new knowledge did you gain, or what skills did you improve, by participating in Future City?

Future City Student Survey #2

Please tell us how much you agree with each of the following statements: *Future City...*

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
...taught me that I and my classmates can create something on our own without direction from a teacher."	◯	◯	◯	◯	◯
...has helped me to see the value in working with a team to solve problems."	◯	◯	◯	◯	◯
...has made me think that I could be an engineer someday."	◯	◯	◯	◯	◯
...has made me interested in doing other engineering clubs or activities."	◯	◯	◯	◯	◯
...has helped me see that math and science are important to my future."	◯	◯	◯	◯	◯
...has helped me to appreciate all the engineering that goes a city."	◯	◯	◯	◯	◯
...has made me more aware of civics issues like politics and taxes."	◯	◯	◯	◯	◯
...has given me an outlet for my creativity and imagination."	◯	◯	◯	◯	◯
...has given me a place where I fit in."	◯	◯	◯	◯	◯
...has given me a chance to use my creative writing skills."	◯	◯	◯	◯	◯
...has boosted my confidence in myself."	◯	◯	◯	◯	◯
...has helped me learn the value of ethics."	◯	◯	◯	◯	◯
...has helped me in my other classes." (Please list)	◯	◯	◯	◯	◯

Classes:

Did your group have an engineer mentor?

◯ Yes

◯ No

Future City Student Survey #2

Please tell us how much you agree or disagree with each of the following sentences: *"My Future City mentor (the engineer)…*

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
…helped me to see myself as an engineer someday."	◯	◯	◯	◯	◯
…explained what s/he does in his job."	◯	◯	◯	◯	◯
…was important in guiding us on the project."	◯	◯	◯	◯	◯

Which of the following is true of your Future City experience?

◯ The kids in my group mostly made the design decisions.

◯ The adults (teacher and/or mentor) mostly made the design decisions.

◯ The kids and adults shared the responsibility equally for the design decisions.

Would you participate in Future City again, if you could?

◯ Yes

◯ Maybe

◯ No

What did you like MOST about Future City? What surprised you most about your experiences in Future City?

What did you like LEAST about Future City? How can we improve the Future City program?

Appendix B: Student Survey, National Sample

Future City Student Regional Survey

Please tell us about your experience with Future City. This survey is anonymous, so please be honest about what you like and dislike so we can make the program better for everyone. THANK YOU!

What state do you live in?

State:

What school do you attend?

Please tell us about your experience with Future City by telling us what you thought of each part of Future City:

	I Loved It	I Liked It	In the Middle	I Didn't Like It Much	I Didn't Like It at All	I Didn't Do This (Yet)
Designing a city in SIM City	◯	◯	◯	◯	◯	◯
The essay	◯	◯	◯	◯	◯	◯
Building a model	◯	◯	◯	◯	◯	◯
Working in a team	◯	◯	◯	◯	◯	◯
Working with an engineer	◯	◯	◯	◯	◯	◯
Preparing a presentation	◯	◯	◯	◯	◯	◯
Delivering the presentation	◯	◯	◯	◯	◯	◯
The competition	◯	◯	◯	◯	◯	◯

What new knowledge did you gain, or what skills did you improve, by participating in Future City?

Future City Student Regional Survey

Please tell us how much you agree with each of the following statements: *Future City...*

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
...taught me that I and my classmates can create something on our own without direction from a teacher."	◯	◯	◯	◯	◯
...has helped me to see the value in working with a team to solve problems."	◯	◯	◯	◯	◯
...has made me think that I could be an engineer someday."	◯	◯	◯	◯	◯
...has made me interested in doing other engineering clubs or activities."	◯	◯	◯	◯	◯
...has helped me see that math and science are important to my future."	◯	◯	◯	◯	◯
...has helped me to appreciate all the engineering that goes a city."	◯	◯	◯	◯	◯
...has made me more aware of civics issues like politics and taxes."	◯	◯	◯	◯	◯
...has given me an outlet for my creativity and imagination."	◯	◯	◯	◯	◯
...has given me a place where I fit in."	◯	◯	◯	◯	◯
...has given me a chance to use my creative writing skills."	◯	◯	◯	◯	◯
...has boosted my confidence in myself."	◯	◯	◯	◯	◯
...has helped me learn the value of ethics."	◯	◯	◯	◯	◯
...has helped me in my other classes." (Please list)	◯	◯	◯	◯	◯

Classes:

Did your group have an engineer mentor?

◯ Yes

◯ No

Future City Student Regional Survey

Please tell us how much you agree or disagree with each of the following sentences: *"My Future City mentor (the engineer)…*

	Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree
…helped me to see myself as an engineer someday."	◯	◯	◯	◯	◯
…explained what s/he does in his job."	◯	◯	◯	◯	◯
…was important in guiding us on the project."	◯	◯	◯	◯	◯

Which of the following is true of your Future City experience?

- ◯ The kids in my group mostly made the design decisions.
- ◯ The adults (teacher and/or mentor) mostly made the design decisions.
- ◯ The kids and adults shared the responsibility equally for the design decisions.

Would you participate in Future City again, if you could?

- ◯ Yes
- ◯ Maybe
- ◯ No

What did you like MOST about Future City? What surprised you most about your experiences in Future City?

What did you like LEAST about Future City? How can we improve the Future City program?

How many times have you participated in Future City?

- ◯ This is my 1st time
- ◯ This is my 2nd time
- ◯ This is my 3rd time

Future City Student Regional Survey

Which of the following engineering programs have you done or would you like to do? (Choose all that apply)

	I Have Done	I Would Like to Do
Future City only	◯	◯
FIRST LEGO League	◯	◯
Project Lead the Way	◯	◯
Engineering classes	◯	◯
Technology education classes	◯	◯

Other (please specify)

Are you related to an engineer?

- ◯ Yes
- ◯ No
- ◯ I don't know

Are you a

- ◯ Girl
- ◯ Boy

How old are you?

What grade are you in?

Which of the following best describes you? (Choose all that apply)

- ☐ White
- ☐ Hispanic
- ☐ Black
- ☐ Asian
- ☐ Other: (please specify)

Appendix C: Additional Student Data Tables

National Data

Table C-1:

Top Ten Things that Student Liked Most

(N = 1938)

	Frequency	Percent
1. Building the model	934	48.2%
2. Teamwork/working in a group	226	11.7%
3. SIM City	204	10.5%
4. Presenting/presentation/questions	141	7.3%
5. Using imagination and creativity	118	6.1%
6. General fun/liked the experience	113	5.8%
7. Spending time with friends/making friends/meeting new people	100	5.2%
8. Designing the city/technology	97	5.0%
9. Essay/narrative/research	91	4.7%
10. Learning/using science, engineering, energy sources	88	4.5%

Table C-2:

Top Ten Things that Students Most Disliked

(N = 1855)

	Frequency	Percent
1. Essay/Narrative	447	24.1%
2. SIM City	269	14.5%
3. Short time limit/not enough time	165	8.9%
4. Lack of teamwork	117	6.3%
5. Presenting/presentation	79	4.3%
6. The model	72	3.9%
7. Competition too long/too much waiting	58	3.1%
8. Stress	56	3.0%
9. Amount of work	31	1.7%
10. Not everyone allowed to go to competition	22	1.2%

Table C-3:

Students' Top Ten Recommended Changes

(N = 654)

	Frequency	Percent
1. Longer time limit	107	16.4%
2. Eliminate SIM City or make it easier to use	59	9.0%
3. Eliminate essay	30	4.6%
4. Length of essay	18	2.8%
5. Allow more people to present/compete	18	2.8%
6. Make it shorter/timing	13	2.0%
7. Allow bigger models	11	1.7%
8. Bigger hallways/more seating/bigger room	11	1.7%
9. Should be an essay OR narrative; or combine them into one	10	1.5%
10. Increase budget	10	1.5%

Table C-4:

Student Engineering-related Self-efficacy and Attitudes

(Site Visit Schools Only)

	N	Pretest Mean	Pretest Std. Deviation	Posttest Mean	Posttest Std. Deviation
I am good at building things.	331	3.90	.865	3.98	.840
I am good at designing things.	331	3.98	.868	4.01	.845
I am good at solving problems.	330	3.98	.829	4.04	.808
I am good at brainstorming (thinking of ideas).	328	3.94	.853	4.02	.836
When working on a project, it's better to work with a team of people than work alone.	332	4.17	.949	4.14	.974
When working on a project, it's better to work with people who are similar than to work with people who come from different backgrounds (gender, age, race, disability, where they live).	329	2.60	1.208	2.76**	1.256
Engineers FIRST find out what people need and THEN they design and create things to fill those needs.	329	4.33	.703	4.39	.721
Engineers usually stick with one design idea, rather than trying out lots of possible ideas.	329	1.84	.810	1.75	.928
Engineers figure out the best materials to use and how to turn them into the things we use every day.	329	4.26	.713	4.35	.695

**Difference was statistically significant at the p<.05 level.

Table C-5:

Student Enjoyment of Future City Components

		Loved It	Liked It	In the Middle	I Didn't Like It Much	I Didn't Like It at All	N
Designing a city in SIM City	Frequency	672	631	309	117	69	1798
	Percent	37.3	35.1	17.2	6.5	3.8	100%
The essay	Frequency	239	583	621	279	77	1799
	Percent	12.3	32.4	34.5	15.5	4.3	100%
Building a model	Frequency	1395	513	123	17	15	2063
	Percent	67.6	24.9	6.0	0.8	0.7	100%
Working in a team	Frequency	1124	672	242	51	21	2110
	Percent	53.2	31.8	11.5	2.4	1.0	100%
Working with a mentor	Frequency	911	688	239	21	15	1874
	Percent	48.6	36.7	12.8	1.1	0.8	100%
Preparing a presentation	Frequency	514	746	480	122	41	1903
	Percent	27.0	39.2	25.2	6.4	2.2	100%
Delivering a presentation	Frequency	701	568	351	90	39	1749
	Percent	40.1	32.5	21.1	5.1	2.2	100%
The competition	Frequency	1221	473	180	35	13	1922
	Percent	63.5	24.6	9.4	1.8	0.7	100%

Table C-6:

Impact of Future City, from Student Perspective

Future City…		Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree	Total
…taught me that I and my classmates can create something on our own without direction from a teacher.	Frequency	887	904	265	47	15	2118
	Percent	40.0	40.8	12.0	2.1	.7	95.6
…has helped me to see the value in working with a team to solve problems.	Frequency	1038	782	222	53	21	2116
	Percent	46.9	35.3	10.0	2.4	.9	95.5
…has made me think that I could be an engineer someday.	Frequency	652	607	562	220	70	2111
	Percent	29.4	27.4	25.4	9.9	3.2	95.3
…has made me interested in doing other engineering clubs or activities.	Frequency	647	632	557	217	51	2104
	Percent	29.2	28.5	25.1	9.8	2.3	95.0
…has helped me see that math and science are important to my future.	Frequency	1135	635	256	62	19	2107
	Percent	51.2	28.7	11.6	2.8	.9	95.1
…has helped me appreciate all the engineering that goes into city.	Frequency	1230	664	167	36	10	2107
	Percent	55.5	30.0	7.5	1.6	.5	95.1
…has made me more aware of civics issues like politics and taxes.	Frequency	688	678	515	162	61	2104
	Percent	31.1	30.6	23.3	7.3	2.8	95.0
…has given me an outlet for my creativity and imagination.	Frequency	1225	579	233	49	21	2107
	Percent	55.3	26.1	10.5	2.2	.9	95.1
…has given me a place where I fit in.	Frequency	630	612	581	189	93	2105
	Percent	28.4	27.6	26.2	8.5	4.2	95.0
…has given me a chance to use my creative writing skills.	Frequency	765	572	493	194	84	2108
	Percent	34.5	25.8	22.3	8.8	3.8	95.2

Future City…		Strongly Agree	Agree	In the Middle	Disagree	Strongly Disagree	Total
…has boosted my confidence in myself.	Frequency	823	632	441	136	80	2112
	Percent	37.2	28.5	19.9	6.1	3.6	95.3
…has helped me learn the value of ethics.	Frequency	596	840	517	88	33	2074
	Percent	26.9	37.9	23.3	4.0	1.5	93.6
…has helped me in other classes.	Frequency	442	462	595	375	195	2069
	Percent	20.0	20.9	26.9	16.9	8.8	93.4

Regional Data

Table C-7:
Years of Future City Participation, by Region

		One year	Two years	Three years	Missing	Total
Alabama	Count	1	47	3	0	51
	% within region	2.0%	92.2%	5.9%	.0%	100.0%
Arizona	Count	5	27	1	0	33
	% within region	15.2%	81.8%	3.0%	.0%	100.0%
Colorado	Count	0	14	0	0	14
	% within region	.0%	100.0%	.0%	.0%	100.0%
Florida (South)	Count	0	16	2	0	18
	% within region	.0%	88.9%	11.1%	.0%	100.0%
Florida (Tampa Bay)	Count	0	63	10	0	73
	% within region	.0%	86.3%	13.7%	.0%	100.0%
Georgia	Count	1	59	5	0	65
	% within region	1.5%	90.8%	7.7%	.0%	100.0%
Great Plains	Count	4	83	16	0	103
	% within region	3.9%	80.6%	15.5%	.0%	100.0%
Idaho	Count	10	74	11	3	98
	% within region	10.2%	75.5%	11.2%	3.1%	100.0%
Illinois (Chicago)	Count	2	21	5	0	28
	% within region	7.1%	75.0%	17.9%	.0%	100.0%
Indiana	Count	29	110	10	2	151
	% within region	19.2%	72.8%	6.6%	1.3%	100.0%
Iowa	Count	1	55	12	0	68
	% within region	1.5%	80.9%	17.6%	.0%	100.0%
Kentucky	Count	0	17	0	0	17
	% within region	.0%	100.0%	.0%	.0%	100.0%
Louisiana	Count	0	10	0	0	10
	% within region	.0%	100.0%	.0%	.0%	100.0%
Michigan	Count	0	13	5	0	18
	% within region	.0%	72.2%	27.8%	.0%	100.0%
Mid-Atlantic	Count	6	34	12	0	52
	% within region	11.5%	65.4%	23.1%	.0%	100.0%

		One year	Two years	Three years	Missing	Total
Minnesota	Count	1	92	11	0	104
	% within region	1.0%	88.5%	10.6%	.0%	100.0%
Nebraska	Count	1	39	3	0	43
	% within region	2.3%	90.7%	7.0%	.0%	100.0%
Nevada	Count	2	28	0	0	30
	% within region	6.7%	93.3%	.0%	.0%	100.0%
New England	Count	2	54	14	6	76
	% within region	2.6%	71.1%	18.4%	7.9%	100.0%
New Jersey	Count	15	147	57	1	220
	% within region	6.8%	66.8%	25.9%	.5%	100.0%
New York (Albany)	Count	2	43	4	0	49
	% within region	4.1%	87.8%	8.2%	.0%	100.0%
North Carolina	Count	1	18	5	0	24
	% within region	4.2%	75.0%	20.8%	.0%	100.0%
Ohio	Count	0	24	0	0	24
	% within region	.0%	100.0%	.0%	.0%	100.0%
Oklahoma	Count	0	33	12	0	45
	% within region	.0%	73.3%	26.7%	.0%	100.0%
Pennsylvania (Central)	Count	0	3	0	0	3
	% within region	.0%	100.0%	.0%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	8	249	39	7	303
	% within region	2.6%	82.2%	12.9%	2.3%	100.0%
Pennsylvania (Pittsburgh)	Count	0	19	11	0	30
	% within region	.0%	63.3%	36.7%	.0%	100.0%
South Carolina	Count	5	56	18	0	79
	% within region	6.3%	70.9%	22.8%	.0%	100.0%
Texas (Central)	Count	1	69	11	0	81
	% within region	1.2%	85.2%	13.6%	.0%	100.0%
Texas (Houston)	Count	1	71	12	0	84
	% within region	1.2%	84.5%	14.3%	.0%	100.0%
Texas (North)	Count	0	13	6	0	19
	% within region	.0%	68.4%	31.6%	.0%	100.0%
Virginia	Count	0	54	14	0	68

		One year	Two years	Three years	Missing	Total
	% within region	.0%	79.4%	20.6%	.0%	100.0%
Washington	Count	1	31	14	4	50
	% within region	2.0%	62.0%	28.0%	8.0%	100.0%
Wisconsin	Count	3	48	33	0	84
	% within region	3.6%	57.1%	39.3%	.0%	100.0%

Table C-8:
Student Gender, by Region

		Female	Male	Missing	Total
Alabama	Count	25	24	2	51
	% within region	49.0%	47.1%	3.9%	100.0%
Arizona	Count	12	17	4	33
	% within region	36.4%	51.5%	12.1%	100.0%
Colorado	Count	8	6	0	14
	% within region	57.1%	42.9%	.0%	100.0%
Florida (South)	Count	7	11	0	18
	% within region	38.9%	61.1%	.0%	100.0%
Florida (Tampa Bay)	Count	24	48	1	73
	% within region	32.9%	65.8%	1.4%	100.0%
Georgia	Count	31	33	1	65
	% within region	47.7%	50.8%	1.5%	100.0%
Great Plains	Count	38	63	2	103
	% within region	36.9%	61.2%	1.9%	100.0%
Idaho	Count	43	54	1	98
	% within region	43.9%	55.1%	1.0%	100.0%
Illinois (Chicago)	Count	16	11	1	28
	% within region	57.1%	39.3%	3.6%	100.0%
Indiana	Count	83	67	1	151
	% within region	55.0%	44.4%	.7%	100.0%
Iowa	Count	26	41	1	68
	% within region	38.2%	60.3%	1.5%	100.0%
Kentucky	Count	9	8	0	17
	% within region	52.9%	47.1%	.0%	100.0%
Louisiana	Count	4	6	0	10
	% within region	40.0%	60.0%	.0%	100.0%
Michigan	Count	7	11	0	18
	% within region	38.9%	61.1%	.0%	100.0%
Mid-Atlantic	Count	27	21	4	52
	% within region	51.9%	40.4%	7.7%	100.0%
Minnesota	Count	40	64	0	104

		Female	Male	Missing	Total
	% within region	38.5%	61.5%	.0%	100.0%
Nebraska	Count	20	20	3	43
	% within region	46.5%	46.5%	7.0%	100.0%
Nevada	Count	8	21	1	30
	% within region	26.7%	70.0%	3.3%	100.0%
New England	Count	33	41	2	76
	% within region	43.4%	53.9%	2.6%	100.0%
New Jersey	Count	131	82	7	220
	% within region	59.5%	37.3%	3.2%	100.0%
New York (Albany)	Count	22	26	1	49
	% within region	44.9%	53.1%	2.0%	100.0%
North Carolina	Count	9	14	1	24
	% within region	37.5%	58.3%	4.2%	100.0%
Ohio	Count	13	11	0	24
	% within region	54.2%	45.8%	.0%	100.0%
Oklahoma	Count	23	22	0	45
	% within region	51.1%	48.9%	.0%	100.0%
Pennsylvania (Central)	Count	0	3	0	3
	% within region	.0%	100.0%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	148	148	7	303
	% within region	48.8%	48.8%	2.3%	100.0%
Pennsylvania (Pittsburgh)	Count	23	7	0	30
	% within region	76.7%	23.3%	.0%	100.0%
South Carolina	Count	39	33	7	79
	% within region	49.4%	41.8%	8.9%	100.0%
Texas (Central)	Count	33	47	1	81
	% within region	40.7%	58.0%	1.2%	100.0%
Texas (Houston)	Count	33	51	0	84
	% within region	39.3%	60.7%	.0%	100.0%
Texas (North)	Count	10	8	1	19
	% within region	52.6%	42.1%	5.3%	100.0%
Virginia	Count	19	49	0	68
	% within region	27.9%	72.1%	.0%	100.0%

		Female	Male	Missing	Total
Washington	Count	16	34	0	50
	% within region	32.0%	68.0%	.0%	100.0%
Wisconsin	Count	40	42	2	84
	% within region	47.6%	50.0%	2.4%	100.0%
Total	Count	1020	1144	51	2215
	% within region	46.0%	51.6%	2.3%	100.0%

Table C-9:
Student Age, by Region

		10	11	12	13	14	15	Total
Alabama	Count	0	6	12	21	10	0	49
	% within region	.0%	12.2%	24.5%	42.9%	20.4%	.0%	100.0%
Arizona	Count	0	7	22	0	0	0	29
	% within region	.0%	24.1%	75.9%	.0%	.0%	.0%	100.0%
Colorado	Count	0	0	0	7	6	1	14
	% within region	.0%	.0%	.0%	50.0%	42.9%	7.1%	100.0%
Florida (South)	Count	0	0	2	10	6	0	18
	% within region	.0%	.0%	11.1%	55.6%	33.3%	.0%	100.0%
Florida (Tampa Bay)	Count	0	1	22	32	18	0	73
	% within region	.0%	1.4%	30.1%	43.8%	24.7%	.0%	100.0%
Georgia	Count	1	11	20	21	9	2	64
	% within region	1.6%	17.2%	31.3%	32.8%	14.1%	3.1%	100.0%
Great Plains	Count	1	2	26	48	19	1	97
	% within region	1.0%	2.1%	26.8%	49.5%	19.6%	1.0%	100.0%
Idaho	Count	1	17	15	40	15	1	89
	% within region	1.1%	19.1%	16.9%	44.9%	16.9%	1.1%	100.0%
Illinois (Chicago)	Count	0	1	5	18	3	0	27
	% within region	.0%	3.7%	18.5%	66.7%	11.1%	.0%	100.0%
Indiana	Count	0	1	12	83	27	0	123
	% within region	.0%	.8%	9.8%	67.5%	22.0%	.0%	100.0%
Iowa	Count	0	6	10	29	22	0	67
	% within region	.0%	9.0%	14.9%	43.3%	32.8%	.0%	100.0%
Kentucky	Count	0	0	5	9	3	0	17
	% within region	.0%	.0%	29.4%	52.9%	17.6%	.0%	100.0%
Louisiana	Count	0	0	5	3	2	0	10
	% within region	.0%	.0%	50.0%	30.0%	20.0%	.0%	100.0%
Michigan	Count	0	2	2	9	5	0	18
	% within region	.0%	11.1%	11.1%	50.0%	27.8%	.0%	100.0%
Mid-Atlantic	Count	0	5	18	23	2	0	48
	% within region	.0%	10.4%	37.5%	47.9%	4.2%	.0%	100.0%
Minnesota	Count	0	6	42	42	10	1	101

		10	11	12	13	14	15	Total
	% within region	.0%	5.9%	41.6%	41.6%	9.9%	1.0%	100.0%
Nebraska	Count	0	1	7	24	9	0	41
	% within region	.0%	2.4%	17.1%	58.5%	22.0%	.0%	100.0%
Nevada	Count	0	5	7	12	4	0	28
	% within region	.0%	17.9%	25.0%	42.9%	14.3%	.0%	100.0%
New England	Count	2	4	20	30	11	2	69
	% within region	2.9%	5.8%	29.0%	43.5%	15.9%	2.9%	100.0%
New Jersey	Count	0	9	67	89	31	0	196
	% within region	.0%	4.6%	34.2%	45.4%	15.8%	.0%	100.0%
New York (Albany)	Count	2	1	18	18	7	2	48
	% within region	4.2%	2.1%	37.5%	37.5%	14.6%	4.2%	100.0%
North Carolina	Count	0	2	11	6	4	0	23
	% within region	.0%	8.7%	47.8%	26.1%	17.4%	.0%	100.0%
Ohio	Count	0	2	5	10	7	0	24
	% within region	.0%	8.3%	20.8%	41.7%	29.2%	.0%	100.0%
Oklahoma	Count	0	5	12	19	9	0	45
	% within region	.0%	11.1%	26.7%	42.2%	20.0%	.0%	100.0%
Pennsylvania (Central)	Count	0	0	1	2	0	0	3
	% within region	.0%	.0%	33.3%	66.7%	.0%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	0	11	72	126	84	1	294
	% within region	.0%	3.7%	24.5%	42.9%	28.6%	.3%	100.0%
Pennsylvania (Pittsburgh)	Count	0	0	5	17	8	0	30
	% within region	.0%	.0%	16.7%	56.7%	26.7%	.0%	100.0%
South Carolina	Count	0	6	20	30	15	0	71
	% within region	.0%	8.5%	28.2%	42.3%	21.1%	.0%	100.0%
Texas (Central)	Count	0	7	15	35	23	0	80
	% within region	.0%	8.8%	18.8%	43.8%	28.8%	.0%	100.0%
Texas (Houston)	Count	1	9	8	38	27	1	84
	% within region	1.2%	10.7%	9.5%	45.2%	32.1%	1.2%	100.0%
Texas (North)	Count	0	0	2	10	7	0	19
	% within region	.0%	.0%	10.5%	52.6%	36.8%	.0%	100.0%
Virginia	Count	0	5	17	29	17	0	68

		10	11	12	13	14	15	Total
	% within region	.0%	7.4%	25.0%	42.6%	25.0%	.0%	100.0%
Washington	Count	0	5	16	18	9	0	48
	% within region	.0%	10.4%	33.3%	37.5%	18.8%	.0%	100.0%
Wisconsin	Count	0	6	23	38	15	0	82
	% within region	.0%	7.3%	28.0%	46.3%	18.3%	.0%	100.0%
Total	Count	8	143	544	946	444	12	2097
	% within region	.4%	6.8%	25.9%	45.1%	21.2%	.6%	100.0%

Table C-10:
Student Grade, by Region

		5	6	7	8	Total
Alabama	Count	0	9	17	23	49
	% within region	.0%	18.4%	34.7%	46.9%	100.0%
Arizona	Count	0	27	1	0	28
	% within region	.0%	96.4%	3.6%	.0%	100.0%
Colorado	Count	0	0	0	14	14
	% within region	.0%	.0%	.0%	100.0%	100.0%
Florida (South)	Count	0	0	3	15	18
	% within region	.0%	.0%	16.7%	83.3%	100.0%
Florida (Tampa Bay)	Count	0	6	29	38	73
	% within region	.0%	8.2%	39.7%	52.1%	100.0%
Georgia	Count	0	16	24	24	64
	% within region	.0%	25.0%	37.5%	37.5%	100.0%
Great Plains	Count	0	8	49	40	97
	% within region	.0%	8.2%	50.5%	41.2%	100.0%
Idaho	Count	0	25	16	48	89
	% within region	.0%	28.1%	18.0%	53.9%	100.0%
Illinois (Chicago)	Count	0	2	12	13	27
	% within region	.0%	7.4%	44.4%	48.1%	100.0%
Indiana	Count	0	2	21	100	123
	% within region	.0%	1.6%	17.1%	81.3%	100.0%
Iowa	Count	0	6	15	46	67
	% within region	.0%	9.0%	22.4%	68.7%	100.0%
Kentucky	Count	0	0	9	8	17
	% within region	.0%	.0%	52.9%	47.1%	100.0%
Louisiana	Count	0	0	8	2	10
	% within region	.0%	.0%	80.0%	20.0%	100.0%
Michigan	Count	0	2	3	13	18
	% within region	.0%	11.1%	16.7%	72.2%	100.0%
Mid-Atlantic	Count	0	7	22	19	48
	% within region	.0%	14.6%	45.8%	39.6%	100.0%
Minnesota	Count	0	21	51	29	101

		5	6	7	8	Total
	% within region	.0%	20.8%	50.5%	28.7%	100.0%
Nebraska	Count	0	1	16	25	42
	% within region	.0%	2.4%	38.1%	59.5%	100.0%
Nevada	Count	0	5	16	7	28
	% within region	.0%	17.9%	57.1%	25.0%	100.0%
New England	Count	2	6	28	33	69
	% within region	2.9%	8.7%	40.6%	47.8%	100.0%
New Jersey	Count	0	15	88	94	197
	% within region	.0%	7.6%	44.7%	47.7%	100.0%
New York (Albany)	Count	1	5	18	24	48
	% within region	2.1%	10.4%	37.5%	50.0%	100.0%
North Carolina	Count	0	3	12	8	23
	% within region	.0%	13.0%	52.2%	34.8%	100.0%
Ohio	Count	0	3	7	14	24
	% within region	.0%	12.5%	29.2%	58.3%	100.0%
Oklahoma	Count	0	6	20	19	45
	% within region	.0%	13.3%	44.4%	42.2%	100.0%
Pennsylvania (Central)	Count	0	0	3	0	3
	% within region	.0%	.0%	100.0%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	0	27	87	181	295
	% within region	.0%	9.2%	29.5%	61.4%	100.0%
Pennsylvania (Pittsburgh)	Count	0	0	11	19	30
	% within region	.0%	.0%	36.7%	63.3%	100.0%
South Carolina	Count	0	11	26	34	71
	% within region	.0%	15.5%	36.6%	47.9%	100.0%
Texas (Central)	Count	0	15	17	47	79
	% within region	.0%	19.0%	21.5%	59.5%	100.0%
Texas (Houston)	Count	0	12	8	64	84
	% within region	.0%	14.3%	9.5%	76.2%	100.0%
Texas (North)	Count	0	0	5	14	19
	% within region	.0%	.0%	26.3%	73.7%	100.0%
Virginia	Count	0	7	20	41	68
	% within region	.0%	10.3%	29.4%	60.3%	100.0%

		5	6	7	8	Total
Washington	Count	0	11	22	15	48
	% within region	.0%	22.9%	45.8%	31.3%	100.0%
Wisconsin	Count	0	12	27	43	82
	% within region	.0%	14.6%	32.9%	52.4%	100.0%
Total	Count	3	270	711	1114	2098
	% within region	.1%	12.9%	33.9%	53.1%	100.0%

Table C-11:
Support of Engineer Mentor, by Region

		Yes	No	Missing	Total
Alabama	Count	34	13	4	51
	% within region	66.7%	25.5%	7.8%	100.0%
Arizona	Count	26	5	2	33
	% within region	78.8%	15.2%	6.1%	100.0%
Colorado	Count	14	0	0	14
	% within region	100.0%	.0%	.0%	100.0%
Florida (South)	Count	16	2	0	18
	% within region	88.9%	11.1%	.0%	100.0%
Florida (Tampa Bay)	Count	53	20	0	73
	% within region	72.6%	27.4%	.0%	100.0%
Georgia	Count	58	4	3	65
	% within region	89.2%	6.2%	4.6%	100.0%
Great Plains	Count	79	23	1	103
	% within region	76.7%	22.3%	1.0%	100.0%
Idaho	Count	87	8	3	98
	% within region	88.8%	8.2%	3.1%	100.0%
Illinois (Chicago)	Count	16	11	1	28
	% within region	57.1%	39.3%	3.6%	100.0%
Indiana	Count	131	19	1	151
	% within region	86.8%	12.6%	.7%	100.0%
Iowa	Count	64	3	1	68
	% within region	94.1%	4.4%	1.5%	100.0%
Kentucky	Count	14	2	1	17
	% within region	82.4%	11.8%	5.9%	100.0%
Louisiana	Count	8	0	2	10
	% within region	80.0%	.0%	20.0%	100.0%
Michigan	Count	15	2	1	18
	% within region	83.3%	11.1%	5.6%	100.0%
Mid-Atlantic	Count	39	10	3	52
	% within region	75.0%	19.2%	5.8%	100.0%
Minnesota	Count	97	1	6	104

		Yes	No	Missing	Total
	% within region	93.3%	1.0%	5.8%	100.0%
Nebraska	Count	23	17	3	43
	% within region	53.5%	39.5%	7.0%	100.0%
Nevada	Count	21	8	1	30
	% within region	70.0%	26.7%	3.3%	100.0%
New England	Count	31	41	4	76
	% within region	40.8%	53.9%	5.3%	100.0%
New Jersey	Count	186	22	12	220
	% within region	84.5%	10.0%	5.5%	100.0%
New York (Albany)	Count	40	6	3	49
	% within region	81.6%	12.2%	6.1%	100.0%
North Carolina	Count	18	5	1	24
	% within region	75.0%	20.8%	4.2%	100.0%
Ohio	Count	23	0	1	24
	% within region	95.8%	.0%	4.2%	100.0%
Oklahoma	Count	41	3	1	45
	% within region	91.1%	6.7%	2.2%	100.0%
Pennsylvania (Central)	Count	3	0	0	3
	% within region	100.0%	.0%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	274	20	9	303
	% within region	90.4%	6.6%	3.0%	100.0%
Pennsylvania (Pittsburgh)	Count	26	0	4	30
	% within region	86.7%	.0%	13.3%	100.0%
South Carolina	Count	57	11	11	79
	% within region	72.2%	13.9%	13.9%	100.0%
Texas (Central)	Count	52	25	4	81
	% within region	64.2%	30.9%	4.9%	100.0%
Texas (Houston)	Count	66	14	4	84
	% within region	78.6%	16.7%	4.8%	100.0%
Texas (North)	Count	14	5	0	19
	% within region	73.7%	26.3%	.0%	100.0%
Virginia	Count	45	23	0	68
	% within region	66.2%	33.8%	.0%	100.0%

		Yes	No	Missing	Total
Washington	Count	36	12	2	50
	% within region	72.0%	24.0%	4.0%	100.0%
Wisconsin	Count	72	4	8	84
	% within region	85.7%	4.8%	9.5%	100.0%
Total	Count	1779	339	97	2215
	% within region	80.3%	15.3%	4.4%	100.0%

Table C-12:
Which of the following is true of your Future City experience?, by Region

		The kids in my group mostly made the design decisions	The adults (teachers and mentors) mostly made the design decisions	The kids and adults shared the responsibility equally	Missing	Total
Alabama	Count	33	0	17	1	51
	% within region	64.7%	.0%	33.3%	2.0%	100.0%
Arizona	Count	20	1	9	3	33
	% within region	60.6%	3.0%	27.3%	9.1%	100.0%
Colorado	Count	11	0	3	0	14
	% within region	78.6%	.0%	21.4%	.0%	100.0%
Florida (South)	Count	12	2	4	0	18
	% within region	66.7%	11.1%	22.2%	.0%	100.0%
Florida (Tampa Bay)	Count	51	1	21	0	73
	% within region	69.9%	1.4%	28.8%	.0%	100.0%
Georgia	Count	42	1	20	2	65
	% within region	64.6%	1.5%	30.8%	3.1%	100.0%
Great Plains	Count	54	4	27	18	103
	% within region	52.4%	3.9%	26.2%	17.5%	100.0%
Idaho	Count	55	16	17	10	98
	% within region	56.1%	16.3%	17.3%	10.2%	100.0%
Illinois (Chicago)	Count	16	2	9	1	28
	% within region	57.1%	7.1%	32.1%	3.6%	100.0%
Indiana	Count	100	17	18	16	151
	% within region	66.2%	11.3%	11.9%	10.6%	100.0%
Iowa	Count	50	0	16	2	68
	% within region	73.5%	.0%	23.5%	2.9%	100.0%
Kentucky	Count	15	0	2	0	17
	% within region	88.2%	.0%	11.8%	.0%	100.0%
Louisiana	Count	8	0	2	0	10

		The kids in my group mostly made the design decisions	The adults (teachers and mentors) mostly made the design decisions	The kids and adults shared the responsibility equally	Missing	Total
	% within region	80.0%	.0%	20.0%	.0%	100.0%
Michigan	Count	14	0	4	0	18
	% within region	77.8%	.0%	22.2%	.0%	100.0%
Mid-Atlantic	Count	27	0	21	4	52
	% within region	51.9%	.0%	40.4%	7.7%	100.0%
Minnesota	Count	62	2	36	4	104
	% within region	59.6%	1.9%	34.6%	3.8%	100.0%
Nebraska	Count	34	0	7	2	43
	% within region	79.1%	.0%	16.3%	4.7%	100.0%
Nevada	Count	18	0	11	1	30
	% within region	60.0%	.0%	36.7%	3.3%	100.0%
New England	Count	33	7	18	18	76
	% within region	43.4%	9.2%	23.7%	23.7%	100.0%
New Jersey	Count	131	17	39	33	220
	% within region	59.5%	7.7%	17.7%	15.0%	100.0%
New York (Albany)	Count	28	1	19	1	49
	% within region	57.1%	2.0%	38.8%	2.0%	100.0%
North Carolina	Count	18	0	5	1	24
	% within region	75.0%	.0%	20.8%	4.2%	100.0%
Ohio	Count	15	0	8	1	24
	% within region	62.5%	.0%	33.3%	4.2%	100.0%
Oklahoma	Count	28	0	17	0	45
	% within region	62.2%	.0%	37.8%	.0%	100.0%
Pennsylvania (Central)	Count	3	0	0	0	3
	% within region	100.0%	.0%	.0%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	175	5	119	4	303
	% within region	57.8%	1.7%	39.3%	1.3%	100.0%

		The kids in my group mostly made the design decisions	The adults (teachers and mentors) mostly made the design decisions	The kids and adults shared the responsibility equally	Missing	Total
Pennsylvania (Pittsburgh)	Count	18	0	11	1	30
	% within region	60.0%	.0%	36.7%	3.3%	100.0%
South Carolina	Count	43	0	29	7	79
	% within region	54.4%	.0%	36.7%	8.9%	100.0%
Texas (Central)	Count	53	1	25	2	81
	% within region	65.4%	1.2%	30.9%	2.5%	100.0%
Texas (Houston)	Count	53	0	29	2	84
	% within region	63.1%	.0%	34.5%	2.4%	100.0%
Texas (North)	Count	11	2	6	0	19
	% within region	57.9%	10.5%	31.6%	.0%	100.0%
Virginia	Count	47	1	20	0	68
	% within region	69.1%	1.5%	29.4%	.0%	100.0%
Washington	Count	31	1	18	0	50
	% within region	62.0%	2.0%	36.0%	.0%	100.0%
Wisconsin	Count	60	2	21	1	84
	% within region	71.4%	2.4%	25.0%	1.2%	100.0%
Total	Count	1369	83	628	135	2215
	% within region	61.8%	3.7%	28.4%	6.1%	100.0%

Table C-13:

Would you participate in Future City again, if you could?, by Region

		Yes	Maybe	No	Missing	Total
Alabama	Count	36	11	3	1	51
	% within region	70.6%	21.6%	5.9%	2.0%	100.0%
Arizona	Count	23	7	0	3	33
	% within region	69.7%	21.2%	.0%	9.1%	100.0%
Colorado	Count	5	7	2	0	14
	% within region	35.7%	50.0%	14.3%	.0%	100.0%
Florida (South)	Count	16	2	0	0	18
	% within region	88.9%	11.1%	.0%	.0%	100.0%
Florida (Tampa Bay)	Count	47	25	1	0	73
	% within region	64.4%	34.2%	1.4%	.0%	100.0%
Georgia	Count	50	13	1	1	65
	% within region	76.9%	20.0%	1.5%	1.5%	100.0%
Great Plains	Count	52	30	3	18	103
	% within region	50.5%	29.1%	2.9%	17.5%	100.0%
Idaho	Count	58	23	9	8	98
	% within region	59.2%	23.5%	9.2%	8.2%	100.0%
Illinois (Chicago)	Count	18	9	1	0	28
	% within region	64.3%	32.1%	3.6%	.0%	100.0%
Indiana	Count	68	53	17	13	151
	% within region	45.0%	35.1%	11.3%	8.6%	100.0%
Iowa	Count	51	16	1	0	68
	% within region	75.0%	23.5%	1.5%	.0%	100.0%
Kentucky	Count	16	1	0	0	17
	% within region	94.1%	5.9%	.0%	.0%	100.0%
Louisiana	Count	6	2	2	0	10
	% within region	60.0%	20.0%	20.0%	.0%	100.0%
Michigan	Count	18	0	0	0	18
	% within region	100.0%	.0%	.0%	.0%	100.0%
Mid-Atlantic	Count	37	7	4	4	52
	% within region	71.2%	13.5%	7.7%	7.7%	100.0%
Minnesota	Count	78	20	4	2	104

		Yes	Maybe	No	Missing	Total
	% within region	75.0%	19.2%	3.8%	1.9%	100.0%
Nebraska	Count	34	7	1	1	43
	% within region	79.1%	16.3%	2.3%	2.3%	100.0%
Nevada	Count	13	14	2	1	30
	% within region	43.3%	46.7%	6.7%	3.3%	100.0%
New England	Count	33	19	7	17	76
	% within region	43.4%	25.0%	9.2%	22.4%	100.0%
New Jersey	Count	131	33	25	31	220
	% within region	59.5%	15.0%	11.4%	14.1%	100.0%
New York (Albany)	Count	40	7	1	1	49
	% within region	81.6%	14.3%	2.0%	2.0%	100.0%
North Carolina	Count	19	4	0	1	24
	% within region	79.2%	16.7%	.0%	4.2%	100.0%
Ohio	Count	18	6	0	0	24
	% within region	75.0%	25.0%	.0%	.0%	100.0%
Oklahoma	Count	34	11	0	0	45
	% within region	75.6%	24.4%	.0%	.0%	100.0%
Pennsylvania (Central)	Count	1	2	0	0	3
	% within region	33.3%	66.7%	.0%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	215	68	18	2	303
	% within region	71.0%	22.4%	5.9%	.7%	100.0%
Pennsylvania (Pittsburgh)	Count	29	1	0	0	30
	% within region	96.7%	3.3%	.0%	.0%	100.0%
South Carolina	Count	58	15	0	6	79
	% within region	73.4%	19.0%	.0%	7.6%	100.0%
Texas (Central)	Count	51	23	7	0	81
	% within region	63.0%	28.4%	8.6%	.0%	100.0%
Texas (Houston)	Count	39	37	8	0	84
	% within region	46.4%	44.0%	9.5%	.0%	100.0%
Texas (North)	Count	9	7	3	0	19
	% within region	47.4%	36.8%	15.8%	.0%	100.0%
Virginia	Count	60	8	0	0	68
	% within region	88.2%	11.8%	.0%	.0%	100.0%

		Yes	Maybe	No	Missing	Total
Washington	Count	38	12	0	0	50
	% within region	76.0%	24.0%	.0%	.0%	100.0%
Wisconsin	Count	69	13	1	1	84
	% within region	82.1%	15.5%	1.2%	1.2%	100.0%
Total	Count	1470	513	121	111	2215
	% within region	66.4%	23.2%	5.5%	5.0%	100.0%

Table C-14:

Perceived Value of Designing a City in SIM City, by Region

	Mean	N	Std. Deviation
Alabama	4.21	43	.861
Arizona	4.63	30	.615
Colorado	3.00	8	1.069
Florida (South)	4.00	14	1.038
Florida (Tampa Bay)	4.05	65	1.052
Georgia	4.03	64	1.054
Great Plains	3.88	81	.967
Idaho	3.86	65	1.088
Illinois (Chicago)	3.85	26	.881
Indiana	3.61	121	1.157
Iowa	3.57	58	1.110
Kentucky	4.43	14	.756
Louisiana	4.25	4	1.500
Michigan	3.91	11	1.375
Mid-Atlantic	4.05	39	1.317
Minnesota	4.06	89	.958
Nebraska	3.72	36	1.323
Nevada	4.19	26	.849
New England	4.06	49	.899
New Jersey	3.61	178	1.254
New York (Albany)	4.39	44	.689
North Carolina	4.05	19	1.079
Ohio	4.05	21	.805
Oklahoma	4.16	37	.764
Pennsylvania (Central)	4.33	3	.577
Pennsylvania (Philadelphia)	4.08	203	1.050
Pennsylvania (Pittsburgh)	4.32	22	1.129
South Carolina	3.73	67	1.109
Texas (Central)	3.95	77	1.146
Texas (Houston)	4.30	82	.952

	Mean	N	Std. Deviation
Texas (North)	3.89	18	.676
Virginia	4.44	63	.778
Washington	3.53	43	1.241
Wisconsin	3.90	78	.906
Total	3.96	1798	1.072

Table C-15:
Perceived Value of the Essay, by Region

	Mean	N	Std. Deviation
Alabama	3.37	43	1.070
Arizona	3.52	29	.986
Colorado	3.50	10	1.179
Florida (South)	3.60	15	.828
Florida (Tampa Bay)	3.13	63	1.100
Georgia	3.52	56	.934
Great Plains	3.41	74	.843
Idaho	3.38	68	1.065
Illinois (Chicago)	3.40	25	.866
Indiana	2.65	130	1.025
Iowa	3.07	56	1.076
Kentucky	3.64	11	.674
Louisiana	4.50	2	.707
Michigan	3.82	11	.874
Mid-Atlantic	3.38	42	1.011
Minnesota	3.42	95	.941
Nebraska	3.59	32	.837
Nevada	3.30	23	1.105
New England	3.02	45	1.252
New Jersey	3.41	184	1.142
New York (Albany)	3.35	43	.973
North Carolina	3.82	22	.733
Ohio	3.13	23	.815
Oklahoma	3.68	34	1.173
Pennsylvania (Central)	2.67	3	.577
Pennsylvania (Philadelphia)	3.31	225	1.030
Pennsylvania (Pittsburgh)	3.59	22	.908
South Carolina	3.56	72	.977
Texas (Central)	3.35	72	1.128
Texas (Houston)	3.54	74	.725
Texas (North)	3.56	18	.784

	Mean	N	Std. Deviation
Virginia	3.29	65	.931
Washington	3.95	39	.724
Wisconsin	3.44	73	1.027
Total	3.35	1799	1.030

Table C-16:
Perceived Value of Building a Model, by Region

	Mean	N	Std. Deviation
Alabama	4.52	50	.931
Arizona	4.63	30	.615
Colorado	4.67	12	.492
Florida (South)	4.50	18	.786
Florida (Tampa Bay)	4.53	73	.801
Georgia	4.78	63	.419
Great Plains	4.59	85	.583
Idaho	4.58	85	.746
Illinois (Chicago)	4.68	28	.670
Indiana	4.42	127	.761
Iowa	4.62	68	.490
Kentucky	4.65	17	.606
Louisiana	4.50	10	.850
Michigan	4.94	17	.243
Mid-Atlantic	4.69	52	.612
Minnesota	4.64	104	.622
Nebraska	4.79	42	.470
Nevada	4.46	28	.744
New England	4.38	56	.906
New Jersey	4.38	189	1.017
New York (Albany)	4.54	48	.771
North Carolina	4.67	24	.637
Ohio	4.59	22	.959
Oklahoma	4.52	44	.664
Pennsylvania (Central)	5.00	3	.000
Pennsylvania (Philadelphia)	4.62	286	.625
Pennsylvania (Pittsburgh)	4.87	30	.346
South Carolina	4.67	75	.600
Texas (Central)	4.56	79	.693
Texas (Houston)	4.52	81	.726
Texas (North)	4.47	19	.612

	Mean	N	Std. Deviation
Virginia	4.79	68	.442
Washington	4.67	48	.559
Wisconsin	4.50	82	.633
Total	4.58	2063	.707

Table C-17:
Perceived Value of Working in a Team, by Region

	Mean	N	Std. Deviation
Alabama	4.31	51	.883
Arizona	3.97	30	1.189
Colorado	4.29	14	.726
Florida (South)	4.67	18	.594
Florida (Tampa Bay)	4.31	72	.781
Georgia	4.40	65	.787
Great Plains	4.06	85	.777
Idaho	4.17	89	1.058
Illinois (Chicago)	4.43	28	.690
Indiana	4.07	140	.949
Iowa	4.35	68	.728
Kentucky	4.41	17	.712
Louisiana	4.80	10	.422
Michigan	4.44	18	.856
Mid-Atlantic	4.29	52	1.109
Minnesota	4.35	103	.801
Nebraska	4.56	43	.590
Nevada	4.23	30	1.040
New England	4.02	57	1.044
New Jersey	4.37	188	.883
New York (Albany)	4.31	49	.847
North Carolina	4.17	24	.963
Ohio	4.67	24	.565
Oklahoma	4.56	45	.725
Pennsylvania (Central)	5.00	3	.000
Pennsylvania (Philadelphia)	4.40	296	.775
Pennsylvania (Pittsburgh)	4.69	29	.604
South Carolina	4.38	78	.810
Texas (Central)	4.26	81	.985
Texas (Houston)	4.58	84	.520
Texas (North)	4.21	19	.855

	Mean	N	Std. Deviation
Virginia	4.69	67	.633
Washington	4.43	49	.791
Wisconsin	4.29	84	.830
Total	4.34	2110	.848

Table C-18:
Perceived Value of Working with an Engineer, by Region

	Mean	N	Std. Deviation
Alabama	4.29	35	.622
Arizona	4.63	27	.688
Colorado	4.31	13	.751
Florida (South)	4.65	17	.493
Florida (Tampa Bay)	4.45	56	.784
Georgia	4.60	63	.583
Great Plains	4.13	67	.796
Idaho	4.31	81	.816
Illinois (Chicago)	4.50	28	.638
Indiana	3.95	111	.872
Iowa	4.19	62	.807
Kentucky	4.50	16	.632
Louisiana	4.80	10	.422
Michigan	4.41	17	.712
Mid-Atlantic	4.43	46	.886
Minnesota	4.36	104	.736
Nebraska	4.30	33	.728
Nevada	3.96	25	.889
New England	3.85	46	1.135
New Jersey	4.18	167	.927
New York (Albany)	4.23	48	.778
North Carolina	4.79	19	.535
Ohio	4.46	24	.658
Oklahoma	4.47	43	.702
Pennsylvania (Central)	5.00	3	.000
Pennsylvania (Philadelphia)	4.29	275	.760
Pennsylvania (Pittsburgh)	4.62	29	.677
South Carolina	4.48	69	.740
Texas (Central)	4.56	63	.616
Texas (Houston)	4.39	75	.733
Texas (North)	4.11	18	1.023

	Mean	N	Std. Deviation
Virginia	4.36	59	.713
Washington	4.19	43	.824
Wisconsin	4.35	82	.726
Total	4.31	1874	.796

Table C-19:
Perceived Value of Preparing a Presentation, by Region

	Mean	N	Std. Deviation
Alabama	4.05	44	.914
Arizona	4.03	30	.928
Colorado	3.57	14	.852
Florida (South)	4.24	17	.562
Florida (Tampa Bay)	3.90	68	.949
Georgia	3.92	65	.816
Great Plains	3.72	78	1.005
Idaho	3.78	76	1.091
Illinois (Chicago)	4.08	24	.717
Indiana	3.26	133	.967
Iowa	3.58	64	1.206
Kentucky	4.29	14	.726
Louisiana	4.14	7	.690
Michigan	4.31	13	.947
Mid-Atlantic	3.76	51	1.088
Minnesota	3.95	101	.876
Nebraska	3.75	32	.916
Nevada	3.93	28	1.016
New England	3.77	47	1.108
New Jersey	3.76	174	1.057
New York (Albany)	3.98	43	.801
North Carolina	4.00	22	.926
Ohio	4.04	24	.999
Oklahoma	3.80	40	1.091
Pennsylvania (Central)	4.33	3	.577
Pennsylvania (Philadelphia)	3.90	208	.930
Pennsylvania (Pittsburgh)	4.10	30	.845
South Carolina	3.86	76	.844
Texas (Central)	3.84	79	.940
Texas (Houston)	3.75	83	.935
Texas (North)	3.68	19	1.157

	Mean	N	Std. Deviation
Virginia	4.06	65	.768
Washington	3.73	49	1.016
Wisconsin	3.95	82	.859
Total	3.83	1903	.971

Table C-20:
Perceived Value of Delivering a Presentation, by Region

	Mean	N	Std. Deviation
Alabama	4.00	32	.916
Arizona	3.97	29	.778
Colorado	4.07	14	.616
Florida (South)	4.28	18	.826
Florida (Tampa Bay)	4.31	64	.889
Georgia	4.21	62	.852
Great Plains	3.92	76	1.152
Idaho	4.11	73	1.161
Illinois (Chicago)	4.20	25	.645
Indiana	3.42	111	1.075
Iowa	4.01	67	1.108
Kentucky	3.92	12	1.165
Louisiana	4.33	6	.816
Michigan	4.54	13	.776
Mid-Atlantic	4.12	42	1.064
Minnesota	4.19	98	.869
Nebraska	3.77	31	1.023
Nevada	3.70	27	.953
New England	3.60	42	1.270
New Jersey	3.98	164	1.085
New York (Albany)	4.17	35	.785
North Carolina	4.04	23	.976
Ohio	4.08	24	1.018
Oklahoma	4.11	35	.932
Pennsylvania (Central)	4.33	3	1.155
Pennsylvania (Philadelphia)	4.10	155	.995
Pennsylvania (Pittsburgh)	4.19	27	.834
South Carolina	4.05	76	.862
Texas (Central)	4.06	79	1.078
Texas (Houston)	3.81	73	.967
Texas (North)	4.06	18	1.162

	Mean	N	Std. Deviation
Virginia	4.31	65	.883
Washington	4.27	48	.818
Wisconsin	4.13	82	.872
Total	4.03	1749	1.004

Table C-21:
Perceived Value of the Competition, by Region

	Mean	N	Std. Deviation
Alabama	4.54	48	.713
Arizona	4.72	29	.591
Colorado	4.14	14	.770
Florida (South)	3.89	18	1.278
Florida (Tampa Bay)	4.58	72	.666
Georgia	4.63	60	.637
Great Plains	4.54	85	.810
Idaho	4.41	83	.963
Illinois (Chicago)	4.68	28	.670
Indiana	4.04	107	1.009
Iowa	4.44	66	.787
Kentucky	4.59	17	.618
Louisiana	4.80	10	.422
Michigan	4.94	18	.236
Mid-Atlantic	4.67	49	.658
Minnesota	4.65	102	.655
Nebraska	4.56	39	.598
Nevada	4.59	29	.733
New England	4.23	47	.960
New Jersey	4.29	163	1.006
New York (Albany)	4.65	49	.663
North Carolina	4.71	24	.624
Ohio	4.61	23	.722
Oklahoma	4.57	44	.661
Pennsylvania (Central)	5.00	3	.000
Pennsylvania (Philadelphia)	4.50	214	.704
Pennsylvania (Pittsburgh)	4.67	30	.479
South Carolina	4.70	77	.608
Texas (Central)	4.30	81	.914
Texas (Houston)	4.26	78	.797
Texas (North)	4.05	19	.970

	Mean	N	Std. Deviation
Virginia	4.72	68	.569
Washington	4.72	46	.544
Wisconsin	4.51	82	.653
Total	4.48	1922	.792

Table C-22:

"Future City taught me that I and my classmates can create something on our own without direction from a teacher."
by Region

	Mean	N	Std. Deviation
Alabama	4.08	51	.821
Arizona	4.07	30	.980
Colorado	4.21	14	.802
Florida (South)	4.06	18	.725
Florida (Tampa Bay)	4.38	73	.719
Georgia	4.40	65	.632
Great Plains	4.29	85	.737
Idaho	3.90	91	1.001
Illinois (Chicago)	4.39	28	.786
Indiana	4.31	139	.711
Iowa	4.44	68	.608
Kentucky	4.06	17	.556
Louisiana	5.00	10	.000
Michigan	4.50	18	.618
Mid-Atlantic	4.34	50	.939
Minnesota	4.24	104	.690
Nebraska	4.50	42	.862
Nevada	4.03	29	.981
New England	3.95	57	.811
New Jersey	4.25	190	.848
New York (Albany)	4.06	49	.852
North Carolina	4.09	23	.668
Ohio	4.33	24	.963
Oklahoma	4.31	45	.668
Pennsylvania (Central)	5.00	3	.000
Pennsylvania (Philadelphia)	4.20	302	.806
Pennsylvania (Pittsburgh)	4.23	30	.774
South Carolina	4.15	78	.927
Texas (Central)	4.19	81	.910

	Mean	N	Std. Deviation
Texas (Houston)	4.15	84	.768
Texas (North)	3.89	19	.567
Virginia	4.41	68	.674
Washington	4.14	49	.842
Wisconsin	4.25	84	.726
Total	4.23	2118	.803

Table C-23:
"Future City has helped me to see the value in working with a team to solve problems."
by Region

	Mean	N	Std. Deviation
Alabama	4.18	51	.953
Arizona	4.33	30	.922
Colorado	4.57	14	.646
Florida (South)	4.50	18	.618
Florida (Tampa Bay)	4.34	73	.749
Georgia	4.46	65	.686
Great Plains	4.35	85	.751
Idaho	4.22	90	.969
Illinois (Chicago)	4.29	28	.713
Indiana	4.28	139	.893
Iowa	4.48	67	.587
Kentucky	4.41	17	.507
Louisiana	4.80	10	.422
Michigan	4.22	18	.808
Mid-Atlantic	4.18	50	.983
Minnesota	4.38	104	.687
Nebraska	4.33	42	.786
Nevada	4.24	29	.912
New England	3.98	57	.991
New Jersey	4.20	191	.930
New York (Albany)	4.31	49	.871
North Carolina	4.26	23	.810
Ohio	4.42	24	.717
Oklahoma	4.49	45	.757
Pennsylvania (Central)	4.00	3	.000
Pennsylvania (Philadelphia)	4.27	302	.846
Pennsylvania (Pittsburgh)	4.70	30	.596
South Carolina	4.49	78	.752
Texas (Central)	4.20	81	1.030
Texas (Houston)	4.27	83	.798

	Mean	N	Std. Deviation
Texas (North)	3.84	19	.898
Virginia	4.43	68	.676
Washington	4.20	49	.841
Wisconsin	4.40	84	.713
Total	4.31	2116	.832

Table C-24:
"Future City has made me think that I could be an engineer someday."
by Region

	Mean	N	Std. Deviation
Alabama	3.61	51	1.168
Arizona	4.24	29	1.244
Colorado	3.79	14	1.122
Florida (South)	3.39	18	1.243
Florida (Tampa Bay)	3.97	73	1.040
Georgia	3.75	65	1.046
Great Plains	3.85	85	1.097
Idaho	3.77	91	1.086
Illinois (Chicago)	3.96	28	1.170
Indiana	3.41	139	1.197
Iowa	4.03	68	1.007
Kentucky	3.94	17	.966
Louisiana	4.20	10	1.135
Michigan	4.00	18	.907
Mid-Atlantic	3.51	49	1.210
Minnesota	3.99	103	.975
Nebraska	3.54	41	1.142
Nevada	3.62	29	1.115
New England	3.54	57	1.297
New Jersey	3.59	191	1.193
New York (Albany)	3.92	49	.975
North Carolina	3.61	23	1.033
Ohio	3.96	24	.999
Oklahoma	3.62	45	.984
Pennsylvania (Central)	3.00	3	.000
Pennsylvania (Philadelphia)	3.57	302	1.123
Pennsylvania (Pittsburgh)	4.24	29	.872
South Carolina	3.84	77	.988
Texas (Central)	3.72	81	1.003
Texas (Houston)	3.52	82	1.057

	Mean	N	Std. Deviation
Texas (North)	3.79	19	1.084
Virginia	4.18	68	.913
Washington	3.69	49	1.045
Wisconsin	3.95	84	1.052
Total	3.73	2111	1.105

Table C-25:
"Future City has made me interested in doing other engineering clubs or activities."
by Region

	Mean	N	Std. Deviation
Alabama	3.76	51	1.274
Arizona	4.37	30	.964
Colorado	3.50	14	1.286
Florida (South)	3.78	18	.943
Florida (Tampa Bay)	3.86	73	1.032
Georgia	3.91	65	.964
Great Plains	3.90	84	1.071
Idaho	3.72	90	1.092
Illinois (Chicago)	3.71	28	1.182
Indiana	3.12	139	1.155
Iowa	3.88	68	.939
Kentucky	3.82	17	.883
Louisiana	3.90	10	1.101
Michigan	4.22	18	.878
Mid-Atlantic	3.80	49	1.000
Minnesota	3.91	104	.977
Nebraska	3.88	42	1.131
Nevada	3.79	28	.876
New England	3.67	57	1.200
New Jersey	3.74	189	1.199
New York (Albany)	4.20	49	.979
North Carolina	4.04	23	.928
Ohio	3.71	24	1.083
Oklahoma	3.60	45	.986
Pennsylvania (Central)	2.33	3	.577
Pennsylvania (Philadelphia)	3.74	298	.999
Pennsylvania (Pittsburgh)	4.14	29	.875
South Carolina	3.82	77	1.010
Texas (Central)	3.72	80	1.055
Texas (Houston)	3.48	82	1.057

	Mean	N	Std. Deviation
Texas (North)	3.79	19	.976
Virginia	4.32	68	.818
Washington	3.39	49	1.037
Wisconsin	3.80	84	.979
Total	3.76	2104	1.071

Table C-26:
"Future City has helped me see that math and science are important to my future."
by Region

	Mean	N	Std. Deviation
Alabama	4.39	51	.850
Arizona	4.72	29	.455
Colorado	4.36	14	.745
Florida (South)	4.39	18	.608
Florida (Tampa Bay)	4.48	73	.801
Georgia	4.34	64	.801
Great Plains	4.52	85	.683
Idaho	4.34	91	.859
Illinois (Chicago)	4.32	28	.863
Indiana	4.20	137	.873
Iowa	4.29	66	.873
Kentucky	4.35	17	.702
Louisiana	4.50	10	.972
Michigan	4.44	18	.922
Mid-Atlantic	4.34	50	.895
Minnesota	4.40	104	.744
Nebraska	4.40	42	.857
Nevada	4.31	29	.967
New England	3.98	56	1.198
New Jersey	4.09	191	1.001
New York (Albany)	4.36	47	.987
North Carolina	4.09	22	1.019
Ohio	4.38	24	.824
Oklahoma	4.60	45	.580
Pennsylvania (Central)	3.33	3	1.155
Pennsylvania (Philadelphia)	4.39	302	.785
Pennsylvania (Pittsburgh)	4.33	30	.994
South Carolina	4.42	77	.848
Texas (Central)	4.46	81	.837
Texas (Houston)	4.20	84	.979

	Mean	N	Std. Deviation
Texas (North)	4.11	19	1.100
Virginia	4.33	67	.894
Washington	4.14	49	.866
Wisconsin	4.48	84	.719
Total	4.33	2107	.866

Table C-27:
"Future City has helped me to appreciate all the engineering that goes a city."
by Region

	Mean	N	Std. Deviation
Alabama	4.31	51	.990
Arizona	4.43	30	.858
Colorado	4.77	13	.439
Florida (South)	4.50	18	.618
Florida (Tampa Bay)	4.52	73	.709
Georgia	4.48	64	.713
Great Plains	4.68	85	.517
Idaho	4.48	91	.721
Illinois (Chicago)	4.57	28	.634
Indiana	4.30	139	.748
Iowa	4.54	68	.679
Kentucky	4.41	17	.618
Louisiana	4.40	10	.699
Michigan	4.28	18	1.074
Mid-Atlantic	4.39	49	.702
Minnesota	4.60	103	.616
Nebraska	4.39	41	1.046
Nevada	4.52	29	.829
New England	4.14	56	.980
New Jersey	4.41	190	.835
New York (Albany)	4.55	49	.614
North Carolina	4.70	23	.559
Ohio	4.67	24	.482
Oklahoma	4.57	44	.587
Pennsylvania (Central)	4.00	3	.000
Pennsylvania (Philadelphia)	4.38	302	.772
Pennsylvania (Pittsburgh)	4.73	30	.521
South Carolina	4.60	77	.693
Texas (Central)	4.44	81	.922
Texas (Houston)	4.28	83	.801

	Mean	N	Std. Deviation
Texas (North)	4.26	19	.653
Virginia	4.61	67	.521
Washington	4.40	48	.736
Wisconsin	4.51	84	.703
Total	4.46	2107	.753

Table C-28:
"Future City has made me more aware of civics issues like politics and taxes."
by Region

	Mean	N	Std. Deviation
Alabama	3.69	51	1.208
Arizona	4.34	29	.936
Colorado	3.64	14	1.216
Florida (South)	4.00	17	.866
Florida (Tampa Bay)	3.90	73	1.056
Georgia	3.97	63	1.107
Great Plains	4.05	85	.912
Idaho	3.64	91	1.131
Illinois (Chicago)	3.86	28	.932
Indiana	3.60	137	1.121
Iowa	4.03	68	.897
Kentucky	4.12	17	.928
Louisiana	4.60	10	.699
Michigan	3.17	18	1.043
Mid-Atlantic	3.58	50	1.052
Minnesota	3.74	104	.995
Nebraska	3.79	42	1.048
Nevada	3.86	29	1.026
New England	3.61	57	1.130
New Jersey	3.88	190	1.092
New York (Albany)	3.85	48	1.010
North Carolina	4.09	22	.868
Ohio	4.46	24	.658
Oklahoma	3.98	45	.866
Pennsylvania (Central)	3.67	3	1.155
Pennsylvania (Philadelphia)	3.73	299	1.071
Pennsylvania (Pittsburgh)	4.20	30	.925
South Carolina	4.13	77	.965
Texas (Central)	3.95	81	.999
Texas (Houston)	3.87	83	1.102

	Mean	N	Std. Deviation
Texas (North)	3.68	19	.885
Virginia	3.87	67	1.100
Washington	3.71	49	1.190
Wisconsin	3.88	84	1.080
Total	3.84	2104	1.056

Table C-29:
"Future City has given me an outlet for my creativity and imagination."
by Region

	Mean	N	Std. Deviation
Alabama	4.41	49	.977
Arizona	4.59	29	.628
Colorado	3.86	14	1.099
Florida (South)	4.39	18	.850
Florida (Tampa Bay)	4.48	73	.852
Georgia	4.68	65	.562
Great Plains	4.40	85	.710
Idaho	4.20	91	1.077
Illinois (Chicago)	4.54	28	.693
Indiana	4.14	139	.945
Iowa	4.49	68	.723
Kentucky	4.53	17	.624
Louisiana	4.80	10	.422
Michigan	4.72	18	.575
Mid-Atlantic	4.52	50	.863
Minnesota	4.46	104	.775
Nebraska	4.62	42	.697
Nevada	4.31	29	1.039
New England	4.05	56	1.069
New Jersey	4.37	191	.854
New York (Albany)	4.39	49	.786
North Carolina	4.43	21	.811
Ohio	4.71	24	.550
Oklahoma	4.51	45	.626
Pennsylvania (Central)	3.67	3	1.155
Pennsylvania (Philadelphia)	4.34	300	.868
Pennsylvania (Pittsburgh)	4.73	30	.583
South Carolina	4.47	76	.757
Texas (Central)	4.33	80	1.003
Texas (Houston)	4.39	84	.792

	Mean	N	Std. Deviation
Texas (North)	4.05	19	1.224
Virginia	4.56	68	.699
Washington	4.38	48	.914
Wisconsin	4.40	84	.746
Total	4.39	2107	.848

Table C-30:
"Future City has given me a place where I fit in."
by Region

	Mean	N	Std. Deviation
Alabama	3.82	50	1.155
Arizona	4.13	30	1.074
Colorado	3.36	14	.929
Florida (South)	3.61	18	1.145
Florida (Tampa Bay)	3.77	73	1.173
Georgia	3.83	65	.961
Great Plains	3.68	84	1.088
Idaho	3.65	91	1.286
Illinois (Chicago)	3.67	27	.961
Indiana	3.24	137	1.108
Iowa	3.75	68	.952
Kentucky	3.82	17	.728
Louisiana	4.40	10	1.265
Michigan	4.11	18	1.183
Mid-Atlantic	3.50	48	1.203
Minnesota	3.93	104	1.082
Nebraska	3.90	41	1.091
Nevada	3.72	29	1.032
New England	3.67	57	1.139
New Jersey	3.60	191	1.231
New York (Albany)	3.76	49	1.109
North Carolina	3.61	23	1.158
Ohio	3.79	24	1.062
Oklahoma	3.91	45	.925
Pennsylvania (Central)	2.67	3	.577
Pennsylvania (Philadelphia)	3.72	301	1.112
Pennsylvania (Pittsburgh)	4.07	30	1.015
South Carolina	3.90	77	1.095
Texas (Central)	3.58	81	1.150
Texas (Houston)	3.54	83	1.097

	Mean	N	Std. Deviation
Texas (North)	3.47	19	1.349
Virginia	4.01	67	1.007
Washington	3.60	48	1.086
Wisconsin	3.89	83	.963
Total	3.71	2105	1.118

Table C-31:
"Future City has given me a chance to use my creative writing skills."
by Region

	Mean	N	Std. Deviation
Alabama	3.51	51	1.391
Arizona	4.31	29	.967
Colorado	3.71	14	1.326
Florida (South)	3.44	18	1.294
Florida (Tampa Bay)	3.75	73	1.222
Georgia	4.08	65	1.080
Great Plains	3.79	85	1.092
Idaho	3.45	91	1.401
Illinois (Chicago)	3.93	28	1.152
Indiana	3.58	139	1.063
Iowa	3.85	68	.902
Kentucky	3.65	17	1.222
Louisiana	4.30	10	1.059
Michigan	3.56	18	1.149
Mid-Atlantic	4.18	49	1.185
Minnesota	3.96	104	1.079
Nebraska	4.13	40	1.223
Nevada	3.66	29	1.173
New England	3.61	56	1.186
New Jersey	3.93	191	1.133
New York (Albany)	3.80	49	.979
North Carolina	4.04	23	.976
Ohio	4.21	24	1.021
Oklahoma	3.82	45	1.134
Pennsylvania (Central)	2.33	3	.577
Pennsylvania (Philadelphia)	3.76	301	1.136
Pennsylvania (Pittsburgh)	4.24	29	.912
South Carolina	4.05	77	1.111
Texas (Central)	3.81	80	1.159
Texas (Houston)	3.70	84	1.138

	Mean	N	Std. Deviation
Texas (North)	3.68	19	1.057
Virginia	3.88	66	1.000
Washington	4.02	49	1.051
Wisconsin	3.90	84	1.048
Total	3.83	2108	1.137

Table C-32:
"Future City has boosted my confidence in myself."
by Region

	Mean	N	Std. Deviation
Alabama	3.76	50	1.465
Arizona	4.57	30	.774
Colorado	4.00	14	1.038
Florida (South)	3.83	18	1.339
Florida (Tampa Bay)	3.86	73	1.032
Georgia	4.18	65	.846
Great Plains	3.89	85	1.058
Idaho	3.78	89	1.259
Illinois (Chicago)	3.71	28	.976
Indiana	3.67	138	1.116
Iowa	4.09	68	.942
Kentucky	4.12	17	.781
Louisiana	4.90	10	.316
Michigan	4.39	18	.916
Mid-Atlantic	4.00	50	1.178
Minnesota	4.08	104	.982
Nebraska	4.02	42	1.179
Nevada	4.07	29	.961
New England	3.53	57	1.151
New Jersey	3.85	191	1.193
New York (Albany)	3.92	49	1.038
North Carolina	4.13	23	.968
Ohio	4.42	24	.776
Oklahoma	4.16	45	1.107
Pennsylvania (Central)	2.67	3	2.082
Pennsylvania (Philadelphia)	3.81	302	1.090
Pennsylvania (Pittsburgh)	4.30	30	.837
South Carolina	4.08	77	1.097
Texas (Central)	3.81	80	1.137
Texas (Houston)	3.86	84	1.077

	Mean	N	Std. Deviation
Texas (North)	3.68	19	1.108
Virginia	4.31	68	.885
Washington	3.88	49	1.111
Wisconsin	4.20	83	.907
Total	3.94	2112	1.093

Table C-33:
"Future City has helped me learn the value of ethics."
by Region

	Mean	N	Std. Deviation
Alabama	3.53	49	1.157
Arizona	4.29	28	.897
Colorado	3.93	14	.730
Florida (South)	3.76	17	1.348
Florida (Tampa Bay)	4.14	72	.877
Georgia	4.11	63	.805
Great Plains	4.04	85	.851
Idaho	3.73	90	1.079
Illinois (Chicago)	3.85	27	1.064
Indiana	3.72	138	.886
Iowa	3.94	68	.751
Kentucky	4.18	17	.728
Louisiana	4.11	9	1.054
Michigan	4.17	18	.786
Mid-Atlantic	3.67	48	.834
Minnesota	4.01	102	.751
Nebraska	3.92	39	1.085
Nevada	3.69	29	.891
New England	3.74	54	1.049
New Jersey	3.89	187	.972
New York (Albany)	3.92	48	.821
North Carolina	4.14	22	.834
Ohio	4.25	24	.676
Oklahoma	4.20	44	.823
Pennsylvania (Central)	3.33	3	.577
Pennsylvania (Philadelphia)	3.81	298	.909
Pennsylvania (Pittsburgh)	4.30	30	.750
South Carolina	4.08	74	.790
Texas (Central)	3.76	80	1.009
Texas (Houston)	3.80	80	.920

	Mean	N	Std. Deviation
Texas (North)	3.58	19	.769
Virginia	4.18	67	.833
Washington	3.82	49	.950
Wisconsin	3.96	82	.881
Total	3.91	2074	.917

Table C-34:
"Future City has helped me in my other classes."
by Region

	Mean	N	Std. Deviation
Alabama	3.00	49	1.291
Arizona	4.00	27	1.240
Colorado	3.36	14	1.151
Florida (South)	3.24	17	1.480
Florida (Tampa Bay)	3.22	72	1.345
Georgia	3.55	62	1.126
Great Plains	3.28	83	1.130
Idaho	3.19	89	1.269
Illinois (Chicago)	3.08	26	1.468
Indiana	3.13	135	1.164
Iowa	3.10	67	1.233
Kentucky	3.82	17	1.131
Louisiana	3.80	10	1.549
Michigan	3.22	18	1.309
Mid-Atlantic	3.36	47	1.309
Minnesota	3.52	103	1.195
Nebraska	3.33	42	1.356
Nevada	3.10	29	1.205
New England	2.85	55	1.283
New Jersey	3.38	187	1.299
New York (Albany)	3.25	48	1.229
North Carolina	3.17	23	1.302
Ohio	3.50	24	1.285
Oklahoma	3.36	44	1.183
Pennsylvania (Central)	2.33	3	1.528
Pennsylvania (Philadelphia)	3.24	297	1.255
Pennsylvania (Pittsburgh)	3.45	29	1.183
South Carolina	3.21	73	1.301
Texas (Central)	3.09	80	1.285
Texas (Houston)	3.07	82	1.245

	Mean	N	Std. Deviation
Texas (North)	3.11	19	1.243
Virginia	3.47	66	1.084
Washington	3.24	50	1.318
Wisconsin	3.63	82	1.000
Total	3.28	2069	1.248

Table C-35:
"My mentor helped me to see myself as an engineer someday."
by Region

	Mean	N	Std. Deviation
Alabama	3.26	34	1.263
Arizona	4.60	25	.707
Colorado	3.46	13	1.450
Florida (South)	3.56	16	1.094
Florida (Tampa Bay)	3.79	53	1.150
Georgia	3.92	59	.970
Great Plains	3.72	61	1.157
Idaho	3.61	80	1.049
Illinois (Chicago)	4.06	17	1.197
Indiana	3.27	83	1.138
Iowa	3.58	64	1.110
Kentucky	3.67	15	.816
Louisiana	3.50	10	.972
Michigan	3.63	16	1.088
Mid-Atlantic	3.40	40	1.150
Minnesota	3.85	102	1.009
Nebraska	3.24	25	1.300
Nevada	3.19	21	1.078
New England	3.33	30	1.295
New Jersey	3.45	163	1.218
New York (Albany)	3.48	42	.994
North Carolina	3.89	18	1.023
Ohio	3.83	24	1.167
Oklahoma	3.60	42	.939
Pennsylvania (Central)	3.67	3	.577
Pennsylvania (Philadelphia)	3.55	278	1.125
Pennsylvania (Pittsburgh)	4.10	30	1.062
South Carolina	3.75	60	.968
Texas (Central)	3.75	53	.959
Texas (Houston)	3.61	70	1.081

	Mean	N	Std. Deviation
Texas (North)	3.14	14	1.099
Virginia	3.81	43	1.075
Washington	3.58	38	1.030
Wisconsin	3.65	79	1.050
Total	3.62	1721	1.111

Table C-36:
"My mentor explained what s/he does in his job."
by Region

	Mean	N	Std. Deviation
Alabama	4.15	34	1.019
Arizona	4.56	25	.870
Colorado	3.69	13	1.032
Florida (South)	4.56	16	.629
Florida (Tampa Bay)	4.34	53	.876
Georgia	4.56	59	.534
Great Plains	4.26	61	.982
Idaho	4.19	80	.995
Illinois (Chicago)	4.71	17	.470
Indiana	3.99	83	.876
Iowa	3.66	64	1.144
Kentucky	4.33	15	.724
Louisiana	4.20	10	.919
Michigan	3.63	16	1.258
Mid-Atlantic	4.51	39	.756
Minnesota	4.47	102	.713
Nebraska	4.32	25	.900
Nevada	4.10	21	.831
New England	4.10	30	1.029
New Jersey	4.25	163	.950
New York (Albany)	4.33	42	.754
North Carolina	4.83	18	.514
Ohio	4.50	24	.722
Oklahoma	4.52	42	.707
Pennsylvania (Central)	4.67	3	.577
Pennsylvania (Philadelphia)	4.33	278	.804
Pennsylvania (Pittsburgh)	4.66	29	.553
South Carolina	4.47	59	.598
Texas (Central)	4.42	52	.801
Texas (Houston)	4.37	70	.663

	Mean	N	Std. Deviation
Texas (North)	3.57	14	1.158
Virginia	4.02	43	1.080
Washington	4.16	37	.986
Wisconsin	4.16	79	.940
Total	4.28	1716	.881

Table C-37:
"My mentor was important in guiding us on the project."
by Region

	Mean	N	Std. Deviation
Alabama	4.06	33	.966
Arizona	4.64	25	.700
Colorado	3.75	12	1.055
Florida (South)	4.75	16	.447
Florida (Tampa Bay)	4.60	53	.840
Georgia	4.64	59	.637
Great Plains	4.08	61	.971
Idaho	4.43	80	.823
Illinois (Chicago)	4.12	17	.928
Indiana	4.09	82	.892
Iowa	3.97	64	1.140
Kentucky	4.07	15	.799
Louisiana	4.60	10	.966
Michigan	4.19	16	1.109
Mid-Atlantic	4.47	40	.716
Minnesota	4.45	102	.698
Nebraska	4.24	25	.926
Nevada	4.05	21	.865
New England	4.13	30	.937
New Jersey	3.84	164	1.250
New York (Albany)	4.48	42	.969
North Carolina	4.76	17	.437
Ohio	4.50	24	.780
Oklahoma	4.62	42	.582
Pennsylvania (Central)	4.00	3	.000
Pennsylvania (Philadelphia)	4.36	278	.858
Pennsylvania (Pittsburgh)	4.45	29	.783
South Carolina	4.37	60	.780
Texas (Central)	4.60	52	.748
Texas (Houston)	4.34	70	.832

	Mean	N	Std. Deviation
Texas (North)	4.00	14	1.177
Virginia	3.98	43	1.058
Washington	4.30	37	.968
Wisconsin	4.27	79	.970
Total	4.29	1715	.932

Appendix D: Parent Survey

Future City Parent Survey

Please take a few moments to tell us about your experience with Future City. This information will be used to make the program better, so we appreciate your honesty.

1. What state do you live in?

State:

2. Number of your children participating in Future City this year:

3. What grades are they in? (Choose all that apply)

- ☐ Sixth
- ☐ Seventh
- ☐ Eighth

4. What school do your child(ren) attend?

5. Were you involved at all in Future City?

- ◯ Yes
- ◯ No

6. Please estimate the number of hours you contributed to Future City this year:

7. Please describe your contributions to the Future City group.

8. To what extent did Future City enhance your child(ren)'s...

	Greatly Enhanced	Enhanced	Enhanced A Bit	Did Not Enhance	Don't Know
...problem solving skills.	◯	◯	◯	◯	◯
...ability to work in teams.	◯	◯	◯	◯	◯
...comfort working in a self-directed manner.	◯	◯	◯	◯	◯
...research and writing skills.	◯	◯	◯	◯	◯
...project management skills.	◯	◯	◯	◯	◯
...oral presentation skills.	◯	◯	◯	◯	◯
...understanding of engineering.	◯	◯	◯	◯	◯

Future City Parent Survey

9. Please use this space to share any anecdotes or stories about how Future City impacted your child(ren).

10. Would you recommend Future City to other families?

- ◯ Yes
- ◯ Maybe
- ◯ No

11. To what extent did Future City meet your expectations this year?

- ◯ Exceeded my expectations
- ◯ Fully met my expectations
- ◯ Partially met my expectations
- ◯ Did not meet my expectations

12. How can we improve the Future City program?

Appendix E: Additional Parent Data Tables

National Data

Table E-1:

Perceived Impact on Students, from Parent Perspective

		Greatly Enhanced	Enhanced	Enhanced A Bit	Did Not Enhance	Don't Know	Total
Problem solving skills	Frequency	*232*	*277*	58	2	24	593
	Percent	*39.1*	*46.7*	9.8	.3	4.0	100.0
Ability to work in teams	Frequency	*297*	*237*	41	6	12	593
	Percent	*50.1*	*40.0*	6.9	1.0	2.0	100.0
Comfort working in a self-directed manner	Frequency	*239*	*256*	72	8	18	593
	Percent	*40.3*	*43.2*	12.1	1.3	3.0	100.0
Research and writing skills	Frequency	*215*	*250*	88	12	28	593
	Percent	*36.3*	*42.2*	14.8	2.0	4.7	100.0
Project management skills	Frequency	*256*	*237*	57	8	35	593
	Percent	*43.2*	*40.0*	9.6	1.3	5.9	100.0
Oral presentation skills	Frequency	*273*	*204*	64	23	29	593
	Percent	*46.0*	*34.4*	10.8	3.9	4.9	100.0
Understanding of engineering	Frequency	*305*	*208*	57	4	19	593
	Percent	*51.4*	*35.1*	9.6	.7	3.2	100.0

Table E-2:

What Parents Liked Best about Future City

(N = 296)

	Frequency	Percent
Learned how to work with a team	66	22.3%
Exposure to and interest in engineering and science	46	15.5%
Generally positive but vague	46	15.5%
Great learning experience	36	12.2%
Fun, engaging experience	35	11.8%
Awareness of environment and importance of city planning	31	10.5%
Motivated/pushed my child	27	9.1%
Time management and project planning	25	8.4%
Enhanced oral presentation skills	22	7.4%
Enhanced child's creativity, more flexibility than school courses	19	6.4%
Increased confidence/self-esteem or more outgoing	15	5.1%
Enhanced problem solving skills	12	4.1%
Learned about energy	11	3.7%
Opportunity for project improvement (i.e., negative comment)	10	3.4%
Brought out child's leadership skills	8	2.7%
Improved computer skills	7	2.4%
Learned how to follow through until project completion	7	2.4%
Research Skills	7	2.4%
Taught child the benefits of hard work	6	2.0%
Child benefited from being mentored	3	1.0%
Improved or new friendships	3	1.0%

Table E-3:

Would Parents Recommend Future City to Other Families?

	Frequency	Percent
Yes	516	87.0
Maybe	27	4.6
No	1	.2
Missing	49	8.3
Total	593	100.0

Regional Data

Table E-4:

Was Parent Involved in Future City? by Region

		Were you involved at all in Future City?		
		Yes	No	Total
Alabama	Count	4	24	28
	% within Region	14.3%	85.7%	100.0%
Arizona	Count	4	1	5
	% within Region	80.0%	20.0%	100.0%
Colorado	Count	6	6	12
	% within Region	50.0%	50.0%	100.0%
Florida (South)	Count	11	9	20
	% within Region	55.0%	45.0%	100.0%
Florida (Tampa Bay)	Count	12	24	36
	% within Region	33.3%	66.7%	100.0%
Georgia	Count	7	5	12
	% within Region	58.3%	41.7%	100.0%
Great Plains	Count	6	12	18
	% within Region	33.3%	66.7%	100.0%
Idaho	Count	2	9	11
	% within Region	18.2%	81.8%	100.0%
Illinois (Chicago)	Count	2	12	14
	% within Region	14.3%	85.7%	100.0%
Indiana	Count	5	14	19
	% within Region	26.3%	73.7%	100.0%
Iowa	Count	16	13	29
	% within Region	55.2%	44.8%	100.0%
Kentucky	Count	0	12	12
	% within Region	.0%	100.0%	100.0%
Louisiana	Count	4	12	16
	% within Region	25.0%	75.0%	100.0%
Michigan	Count	1	0	1
	% within Region	100.0%	.0%	100.0%
Mid-Atlantic	Count	9	10	19
	% within Region	47.4%	52.6%	100.0%
Minnesota	Count	6	9	15

		Were you involved at all in Future City?		Total
	% within Region	40.0%	60.0%	100.0%
Nebraska	Count	3	7	10
	% within Region	30.0%	70.0%	100.0%
Nevada (Southern)	Count	9	4	13
	% within Region	69.2%	30.8%	100.0%
New England	Count	1	8	9
	% within Region	11.1%	88.9%	100.0%
New Jersey	Count	9	8	17
	% within Region	52.9%	47.1%	100.0%
New York (Albany)	Count	1	7	8
	% within Region	12.5%	87.5%	100.0%
North Carolina	Count	4	3	7
	% within Region	57.1%	42.9%	100.0%
Ohio	Count	7	22	29
	% within Region	24.1%	75.9%	100.0%
Oklahoma	Count	4	12	16
	% within Region	25.0%	75.0%	100.0%
Pennsylvania (Central)	Count	23	20	43
	% within Region	53.5%	46.5%	100.0%
Pennsylvania (Philadelphia)	Count	13	40	53
	% within Region	24.5%	75.5%	100.0%
Pennsylvania (Pittsburgh)	Count	6	6	12
	% within Region	50.0%	50.0%	100.0%
South Carolina	Count	17	17	34
	% within Region	50.0%	50.0%	100.0%
Texas (Central)	Count	15	8	23
	% within Region	65.2%	34.8%	100.0%
Texas (Houston)	Count	8	5	13
	% within Region	61.5%	38.5%	100.0%
Texas (North)	Count	0	2	2
	% within Region	.0%	100.0%	100.0%
Virginia	Count	10	27	37
	% within Region	27.0%	73.0%	100.0%
Total	Count	225	368	593
	% within Region	37.9%	62.1%	100.0%

Table E-5:

Average Number of Hours Parents Contributed to Future City, by Region

Region	Mean	N	Std. Deviation
Alabama	6.00	4	6.055
Arizona	23.33	3	15.275
Colorado	6.83	6	7.167
Florida (South)	10.60	10	19.506
Florida (Tampa Bay)	8.22	9	7.823
Georgia	7.86	7	5.367
Great Plains	13.50	6	8.216
Idaho	4.00	2	2.828
Illinois (Chicago)	5.50	2	2.121
Indiana	15.67	3	14.012
Iowa	4.60	15	2.640
Louisiana	7.25	4	4.856
Michigan	40.00	1	.
Mid-Atlantic	10.00	9	8.515
Minnesota	5.67	6	3.386
Nebraska	6.50	2	7.778
Nevada (Southern)	15.43	7	16.308
New England	20.00	1	.
New Jersey	7.00	9	7.071
New York (Albany)	20.00	1	.
North Carolina	18.75	4	17.037
Ohio	26.50	4	17.137
Oklahoma	14.50	4	23.728
Pennsylvania (Central)	22.81	21	26.356
Pennsylvania (Philadelphia)	14.18	11	28.826
Pennsylvania (Pittsburgh)	8.25	4	4.717
South Carolina	21.12	17	28.160
Texas (Central)	31.71	14	35.454
Texas (Houston)	16.25	8	33.902
Virginia	7.00	5	5.788
Total	14.46	199	20.678

Table E-6:

Perceived Impact on Students' Problem-solving Skills, from Parent Perspective, by Region

Region	Mean	N	Std. Deviation
Alabama	3.08	24	.584
Arizona	3.80	5	.447
Colorado	3.00	11	.894
Florida (South)	3.75	20	.444
Florida (Tampa Bay)	3.46	35	.701
Georgia	3.73	11	.467
Great Plains	3.12	17	.600
Idaho	3.20	10	.632
Illinois (Chicago)	3.21	14	.699
Indiana	3.32	19	.671
Iowa	3.04	28	.693
Kentucky	3.25	12	.622
Louisiana	3.50	14	.519
Michigan	4.00	1	.
Mid-Atlantic	3.53	17	.624
Minnesota	2.93	14	.616
Nebraska	3.20	10	.632
Nevada (Southern)	3.38	13	.870
New England	3.71	7	.488
New Jersey	3.50	16	.516
New York (Albany)	3.25	8	.463
North Carolina	3.14	7	.690
Ohio	3.34	29	.614
Oklahoma	3.62	16	.500
Pennsylvania (Central)	3.24	42	.656
Pennsylvania (Philadelphia)	3.20	50	.728
Pennsylvania (Pittsburgh)	3.25	12	.452
South Carolina	3.36	33	.653
Texas (Central)	3.09	23	.733
Texas (Houston)	3.46	13	.660
Texas (North)	3.50	2	.707
Virginia	3.14	36	.639
Total	3.30	569	.660

Table E-7:

Perceived Impact on Students' Ability to Work in Teams, from Parent Perspective, by Region

Region	Mean	N	Std. Deviation
Alabama	3.44	25	.507
Arizona	4.00	5	.000
Colorado	3.25	12	.965
Florida (South)	3.85	20	.366
Florida (Tampa Bay)	3.60	35	.651
Georgia	3.91	11	.302
Great Plains	2.89	18	.676
Idaho	3.27	11	.647
Illinois (Chicago)	3.14	14	.663
Indiana	3.47	19	.513
Iowa	3.17	29	.711
Kentucky	3.25	12	.622
Louisiana	3.67	15	.488
Michigan	4.00	1	.
Mid-Atlantic	3.74	19	.452
Minnesota	2.93	15	.799
Nebraska	3.40	10	.516
Nevada (Southern)	3.08	13	.954
New England	3.71	7	.756
New Jersey	3.47	17	.624
New York (Albany)	3.50	8	.535
North Carolina	3.43	7	.535
Ohio	3.52	29	.574
Oklahoma	3.63	16	.619
Pennsylvania (Central)	3.40	42	.627
Pennsylvania (Philadelphia)	3.16	51	.834
Pennsylvania (Pittsburgh)	3.67	12	.492
South Carolina	3.61	33	.609
Texas (Central)	3.30	23	.703
Texas (Houston)	3.62	13	.506
Texas (North)	4.00	2	.000
Virginia	3.35	37	.588
Total	3.42	581	.669

Table E-8:

Perceived Impact on Students' Comfort Working in a Self-directed Manner, from Parent Perspective, by Region

Region	Mean	N	Std. Deviation
Alabama	3.17	24	.761
Arizona	3.60	5	.548
Colorado	2.83	12	.718
Florida (South)	3.75	20	.444
Florida (Tampa Bay)	3.22	36	.832
Georgia	3.55	11	.688
Great Plains	2.76	17	.752
Idaho	2.82	11	.751
Illinois (Chicago)	3.21	14	.699
Indiana	3.26	19	.653
Iowa	3.14	28	.651
Kentucky	3.17	12	.835
Louisiana	3.33	15	.724
Michigan	4.00	1	.
Mid-Atlantic	3.58	19	.507
Minnesota	2.87	15	.834
Nebraska	3.30	10	.675
Nevada (Southern)	3.08	13	.862
New England	3.71	7	.488
New Jersey	3.47	17	.624
New York (Albany)	3.00	7	.577
North Carolina	3.00	7	1.000
Ohio	3.45	29	.572
Oklahoma	3.63	16	.619
Pennsylvania (Central)	3.24	41	.734
Pennsylvania (Philadelphia)	3.20	51	.775
Pennsylvania (Pittsburgh)	3.33	12	.651
South Carolina	3.44	32	.759
Texas (Central)	3.04	23	.767
Texas (Houston)	3.31	13	.751
Texas (North)	3.50	2	.707
Virginia	3.28	36	.615
Total	3.26	575	.727

Table E-9:

Perceived Impact on Students' Research and Writing Skills, from Parent Perspective, by Region

Region	Mean	N	Std. Deviation
Alabama	2.96	23	.767
Arizona	3.80	5	.447
Colorado	2.75	12	.866
Florida (South)	3.85	20	.366
Florida (Tampa Bay)	3.23	35	.877
Georgia	3.60	10	.699
Great Plains	2.78	18	.732
Idaho	3.20	10	.632
Illinois (Chicago)	3.07	14	.829
Indiana	3.21	19	.713
Iowa	3.07	27	.616
Kentucky	3.27	11	.647
Louisiana	3.27	15	.594
Michigan	4.00	1	.
Mid-Atlantic	3.22	18	.732
Minnesota	3.00	14	.555
Nebraska	3.10	10	.994
Nevada (Southern)	3.23	13	.832
New England	3.43	7	.535
New Jersey	3.25	16	.775
New York (Albany)	3.29	7	.756
North Carolina	2.86	7	.900
Ohio	3.28	29	.649
Oklahoma	3.25	16	.775
Pennsylvania (Central)	3.07	41	.721
Pennsylvania (Philadelphia)	3.20	50	.904
Pennsylvania (Pittsburgh)	3.25	12	.622
South Carolina	3.18	33	.683
Texas (Central)	2.95	22	.785
Texas (Houston)	3.23	13	.832
Texas (North)	3.50	2	.707
Virginia	3.17	35	.954
Total	3.18	565	.767

Table E-10:

Perceived Impact on Students' Project Management Skills, from Parent Perspective, by Region

Region	Mean	N	Std. Deviation
Alabama	2.87	23	.869
Arizona	3.60	5	.548
Colorado	3.17	12	1.030
Florida (South)	3.90	20	.308
Florida (Tampa Bay)	3.44	34	.613
Georgia	3.55	11	.522
Great Plains	3.00	15	.845
Idaho	3.10	10	.568
Illinois (Chicago)	3.14	14	.770
Indiana	3.35	17	.493
Iowa	3.30	27	.609
Kentucky	3.45	11	.522
Louisiana	3.64	14	.633
Michigan	4.00	1	.
Mid-Atlantic	3.44	18	.616
Minnesota	2.87	15	.743
Nebraska	3.40	10	.699
Nevada (Southern)	3.38	13	.650
New England	3.86	7	.378
New Jersey	3.38	16	.719
New York (Albany)	3.50	6	.837
North Carolina	2.86	7	1.069
Ohio	3.41	29	.628
Oklahoma	3.44	16	.727
Pennsylvania (Central)	3.24	41	.699
Pennsylvania (Philadelphia)	3.27	51	.750
Pennsylvania (Pittsburgh)	3.42	12	.515
South Carolina	3.34	32	.827
Texas (Central)	3.24	21	.768
Texas (Houston)	3.42	12	.669
Texas (North)	4.00	2	.000
Virginia	3.28	36	.741
Total	3.33	558	.715

Table E-11:

Perceived Impact on Students' Oral Presentation Skills, from Parent Perspective, by Region

Region	Mean	N	Std. Deviation
Alabama	3.17	24	.637
Arizona	3.80	5	.447
Colorado	3.33	12	.651
Florida (South)	3.85	20	.366
Florida (Tampa Bay)	3.19	36	.951
Georgia	3.10	10	.994
Great Plains	3.25	16	.683
Idaho	3.45	11	.820
Illinois (Chicago)	3.00	13	1.000
Indiana	2.72	18	1.074
Iowa	3.11	28	.685
Kentucky	3.27	11	.905
Louisiana	3.54	13	.776
Michigan	4.00	1	.
Mid-Atlantic	3.39	18	.850
Minnesota	3.60	15	.507
Nebraska	3.30	10	.675
Nevada (Southern)	3.08	13	1.038
New England	3.57	7	1.134
New Jersey	3.38	16	.957
New York (Albany)	3.00	8	.926
North Carolina	3.00	7	1.000
Ohio	3.45	29	.736
Oklahoma	3.47	15	.743
Pennsylvania (Central)	3.31	42	.715
Pennsylvania (Philadelphia)	3.09	47	.996
Pennsylvania (Pittsburgh)	3.42	12	.793
South Carolina	3.21	33	.781
Texas (Central)	3.09	23	.848
Texas (Houston)	3.69	13	.630
Texas (North)	3.50	2	.707
Virginia	3.47	36	.696
Total	3.29	564	.824

Table E-12:

Perceived Impact on Students' Understanding of Engineering, from Parent Perspective, by Region

Region	Mean	N	Std. Deviation
Alabama	3.43	23	.662
Arizona	3.80	5	.447
Colorado	3.33	12	.778
Florida (South)	3.95	20	.224
Florida (Tampa Bay)	3.53	36	.560
Georgia	3.36	11	.809
Great Plains	3.18	17	.636
Idaho	3.18	11	.751
Illinois (Chicago)	3.21	14	.699
Indiana	3.21	19	.855
Iowa	3.11	28	.832
Kentucky	3.33	12	.778
Louisiana	3.21	14	.699
Michigan	4.00	1	.
Mid-Atlantic	3.61	18	.502
Minnesota	3.00	15	.845
Nebraska	3.50	10	.972
Nevada (Southern)	3.58	12	.669
New England	3.50	8	.926
New Jersey	3.41	17	.712
New York (Albany)	3.63	8	.518
North Carolina	3.43	7	.787
Ohio	3.55	29	.572
Oklahoma	3.56	16	.814
Pennsylvania (Central)	3.50	42	.672
Pennsylvania (Philadelphia)	3.33	51	.712
Pennsylvania (Pittsburgh)	3.42	12	.669
South Carolina	3.56	32	.619
Texas (Central)	3.26	23	.752
Texas (Houston)	3.31	13	.751
Texas (North)	3.50	2	.707
Virginia	3.50	36	.561
Total	3.42	574	.696

Table E-13:

Would Parents Recommend Future City to Other Families?, by Region

		Would you recommend Future City to other families?				
		Missing	Yes	Maybe	No	Total
Alabama	Count	1	25	2	0	28
	% within Region	3.6%	89.3%	7.1%	.0%	100.0%
Arizona	Count	0	5	0	0	5
	% within Region	.0%	100.0%	.0%	.0%	100.0%
Colorado	Count	0	12	0	0	12
	% within Region	.0%	100.0%	.0%	.0%	100.0%
Florida (South)	Count	2	18	0	0	20
	% within Region	10.0%	90.0%	.0%	.0%	100.0%
Florida (Tampa Bay)	Count	5	30	1	0	36
	% within Region	13.9%	83.3%	2.8%	.0%	100.0%
Georgia	Count	1	10	1	0	12
	% within Region	8.3%	83.3%	8.3%	.0%	100.0%
Great Plains	Count	2	16	0	0	18
	% within Region	11.1%	88.9%	.0%	.0%	100.0%
Idaho	Count	4	7	0	0	11
	% within Region	36.4%	63.6%	.0%	.0%	100.0%
Illinois (Chicago)	Count	0	14	0	0	14
	% within Region	.0%	100.0%	.0%	.0%	100.0%
Indiana	Count	3	16	0	0	19
	% within Region	15.8%	84.2%	.0%	.0%	100.0%
Iowa	Count	0	26	3	0	29
	% within Region	.0%	89.7%	10.3%	.0%	100.0%
Kentucky	Count	1	11	0	0	12
	% within Region	8.3%	91.7%	.0%	.0%	100.0%
Louisiana	Count	1	15	0	0	16
	% within Region	6.3%	93.8%	.0%	.0%	100.0%
Michigan	Count	0	1	0	0	1
	% within Region	.0%	100.0%	.0%	.0%	100.0%

		Would you recommend Future City to other families?				Total
Mid-Atlantic	Count	3	15	1	0	19
	% within Region	15.8%	78.9%	5.3%	.0%	100.0%
Minnesota	Count	3	11	0	1	15
	% within Region	20.0%	73.3%	.0%	6.7%	100.0%
Nebraska	Count	1	9	0	0	10
	% within Region	10.0%	90.0%	.0%	.0%	100.0%
Nevada (Southern)	Count	1	11	1	0	13
	% within Region	7.7%	84.6%	7.7%	.0%	100.0%
New England	Count	1	7	1	0	9
	% within Region	11.1%	77.8%	11.1%	.0%	100.0%
New Jersey	Count	0	16	1	0	17
	% within Region	.0%	94.1%	5.9%	.0%	100.0%
New York (Albany)	Count	1	7	0	0	8
	% within Region	12.5%	87.5%	.0%	.0%	100.0%
North Carolina	Count	0	7	0	0	7
	% within Region	.0%	100.0%	.0%	.0%	100.0%
Ohio	Count	0	28	1	0	29
	% within Region	.0%	96.6%	3.4%	.0%	100.0%
Oklahoma	Count	4	11	1	0	16
	% within Region	25.0%	68.8%	6.3%	.0%	100.0%
Pennsylvania (Central)	Count	0	38	5	0	43
	% within Region	.0%	88.4%	11.6%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	11	40	2	0	53
	% within Region	20.8%	75.5%	3.8%	.0%	100.0%
Pennsylvania (Pittsburgh)	Count	1	10	1	0	12
	% within Region	8.3%	83.3%	8.3%	.0%	100.0%
South Carolina	Count	0	34	0	0	34
	% within Region	.0%	100.0%	.0%	.0%	100.0%
Texas (Central)	Count	2	16	5	0	23
	% within Region	8.7%	69.6%	21.7%	.0%	100.0%
Texas (Houston)	Count	1	12	0	0	13
	% within Region	7.7%	92.3%	.0%	.0%	100.0%
Texas (North)	Count	0	2	0	0	2
	% within Region	.0%	100.0%	.0%	.0%	100.0%

		Would you recommend Future City to other families?				Total
Virginia	Count	0	36	1	0	37
	% within Region	.0%	97.3%	2.7%	.0%	100.0%
Total	Count	49	516	27	1	593
	% within Region	8.3%	87.0%	4.6%	.2%	100.0%

Table E-14:

The Extent to Which Future City Met Parental Expectations

	Frequency	Percent
Exceeded my expectations	245	41.3
Fully met my expectations	245	41.3
Partially met my expectations	40	6.7
Did not meet my expectations	9	1.5
Missing	54	9.1
Total	593	100.0

Table E-15: The Extent to Which Future City Met Parental Expectations, by Region

Region	Mean	N	Std. Deviation
Alabama	3.22	27	.847
Arizona	3.60	5	.548
Colorado	3.33	12	.651
Florida (South)	3.39	18	1.037
Florida (Tampa Bay)	3.35	31	.709
Georgia	3.55	11	.522
Great Plains	3.07	15	.799
Idaho	3.29	7	.756
Illinois (Chicago)	3.54	13	.519
Indiana	3.31	16	.602
Iowa	3.31	29	.660
Kentucky	3.45	11	.688
Louisiana	3.54	13	.519
Michigan	4.00	1	.
Mid-Atlantic	3.25	16	.683
Minnesota	3.08	12	.900
Nebraska	3.22	9	.667
Nevada (Southern)	3.33	12	.492
New England	3.50	8	.756
New Jersey	3.35	17	.702
New York (Albany)	3.57	7	.535
North Carolina	3.14	7	.690
Ohio	3.55	29	.506
Oklahoma	3.33	12	.888
Pennsylvania (Central)	3.30	43	.513
Pennsylvania (Philadelphia)	3.37	41	.623
Pennsylvania (Pittsburgh)	3.45	11	.522
South Carolina	3.53	34	.563
Texas (Central)	2.67	21	1.065
Texas (Houston)	3.33	12	.492
Texas (North)	3.50	2	.707
Virginia	3.49	37	.651
Total	3.35	539	.690

Appendix F: Teacher Survey

Future City Teacher Survey

Please take a few moments to tell us about your experience with Future City. This information will be used to make the program better, so we appreciate your honesty.

*1. Please tell us about you:

Name:

School:

City/Town:

State:

Email Address:

2. What subject(s) do you teach? (Choose all that apply)

- [ ] Science
- [ ] Math
- [ ] Technology
- [ ] Social Studies
- [ ] English Language Arts
- [ ] Gifted and Talented
- [ ] Other (please specify)

3. Counting this year, how many times have you participated in Future City?

- ◯ One (this year is my first year)
- ◯ Two years
- ◯ Three years
- ◯ Four years
- ◯ Five years
- ◯ Other (please specify)

4. How many students in your organization participated in Future City this year?

5. How many teams did you have this year?

6. How many teams went to the competition this year?

Future City Teacher Survey

7. Did you offer Future City as a course or club or some combination? (Choose all that apply)

- [ ] Club
- [ ] Course (course name):

8. Which students participated in Future City this year? (Choose all that apply)

- [ ] Sixth graders
- [ ] Seventh graders
- [ ] Eighth graders
- [ ] Gifted and talented
- [ ] Regular education
- [ ] Special education
- [ ] Other (please specify)

9. When did your Future City group meet? (Choose all that apply)

- [ ] Mostly during school hours
- [ ] Mostly after school hours
- [ ] Equally during and after school
- [ ] Other (please specify)

10. *For the students in the competition*, please estimate the total number of hours the average student worked on Future City from start to finish:

11. *For the students who did NOT go to the competition*, please estimate the number of hours the average student worked on Future City from start to finish:

12. Please estimate the number of hours YOU worked on Future City this academic year (2011-2012) from start to finish:

Future City Teacher Survey

13. In addition to Future City, which of the following engineering programs does your school offer? (Choose all that apply)

- [ ] FIRST Lego
- [ ] Guest engineer speakers
- [ ] Engineering classes
- [ ] Project Lead the Way
- [ ] Technology education classes
- [ ] Other (please specify)

14. Thinking about all the kids in your group as a whole (not just the kids who went to the competition), to what extent did Future City help improve the students'...

	Greatly Improved	Improved	Improves a Little	Not Improved	Don't Know
...problem solving skills.	◯	◯	◯	◯	◯
...ability to work in teams.	◯	◯	◯	◯	◯
...comfort working in a self-directed manner.	◯	◯	◯	◯	◯
...research and writing skills.	◯	◯	◯	◯	◯
...project management skills.	◯	◯	◯	◯	◯
...oral presentation skills.	◯	◯	◯	◯	◯
...understanding of engineering.	◯	◯	◯	◯	◯

If no improvement, please explain:

15. Please use this space to share any anecdotes or stories about how Future City impacted a student or group of students.

Future City Teacher Survey

16. We'd like to know how valuable each of the following Future City components was for your students.

	High Value	Some Value	Little Value	No Value	N/A or Don't Know
Designing a city in SimCity	◯	◯	◯	◯	◯
The essay	◯	◯	◯	◯	◯
Building a model	◯	◯	◯	◯	◯
Working in a team	◯	◯	◯	◯	◯
Working with a mentor	◯	◯	◯	◯	◯
Preparing a presentation	◯	◯	◯	◯	◯
Delivering a presentation	◯	◯	◯	◯	◯
The competition	◯	◯	◯	◯	◯

If no value, please explain:

17. Did you have an engineer mentor this year?

- ◯ Yes
- ◯ No
- ◯ Only part of the time

18. What challenges, if any, did you encounter with your mentor or in getting a mentor?

19. In what ways, if any, did Future City support your curricular goals? Please be specific.

20. How easy or challenging has it been to make connections between the simulation (SimCity), the essay, and the model? Please explain.

Future City Teacher Survey

21. Did you use the Learning Blocks this year?

- ◯ Yes
- ◯ No

If not, why not?

22. Did the Learning Blocks help you to teach science concepts related to engineering?

- ◯ Yes
- ◯ No

If not, please explain:

23. Did activities from the learning blocks help your students with the Future City components?

- ◯ Yes
- ◯ No

If not, please explain:

24. This year, we made changes to some resources. Please tell us whether these improvements were helpful.

	Very Helpful	Helpful	A Little Helpful	Not Helpful	I Didn't Use This
The new FutureCity.org website	◯	◯	◯	◯	◯
The new handbook	◯	◯	◯	◯	◯
The new Learning Blocks	◯	◯	◯	◯	◯
The new online program calendar	◯	◯	◯	◯	◯

If not helpful, please explain:

25. Are there other resources that would be useful? Please describe.

Future City Teacher Survey

26. Would you recommend Future City to a colleague?

- ◯ Yes
- ◯ Maybe
- ◯ No

27. To what extent did Future City meet your expectations this year?

- ◯ Exceeded my expectations
- ◯ Fully met my expectations
- ◯ Partially met my expectations
- ◯ Did not meet my expectations

28. How can we improve the Future City program?

29. Concord Evaluation Group will be providing an evaluation report to Future City in late spring 2012. If you are interested in receiving a copy of the executive summary of the report by email, please check below:

- ◯ No, thanks
- ◯ Yes, please send me the report executive summary when it is ready

Email address for report:

Appendix G: Additional Teacher Data Tables

National Data

Table G-1:

Perceived Impact on Students, from Teacher Perspective

		Greatly Enhanced	Enhanced	Enhanced A Bit	Did Not Enhance	Don't Know	Total
Problem solving skills	Number	*91*	*200*	33	2	4	330
	Percent	*26.2*	*57.6*	9.5	0.6	1.2	95.1
Ability to work in teams	Number	*142*	*148*	36	5	2	333
	Percent	*40.9*	*42.7*	10.4	1.4	.6	96.0
Comfort working in a self-directed manner	Number	72	*174*	73	10	2	331
	Percent	20.7	*50.1*	21.0	2.9	.6	95.4
Research and writing skills	Number	62	*168*	*87*	12	5	334
	Percent	17.9	*48.4*	*25.1*	3.5	1.4	96.3
Project management	Number	*82*	*174*	65	8	4	333
	Percent	*23.6*	*50.1*	18.7	2.3	1.2	96.0
Oral presentation	Number	*112*	*147*	57	12	6	334
	Percent	*32.3*	*42.4*	16.4	3.5	1.7	96.3
Understanding of engineering	Number	*117*	*162*	40	4	6	329
	Percent	*33.7*	*46.7*	11.5	1.2	1.7	94.8

Table G-2:

Perceived Value of Future City Components, from Teacher Perspective

		High Value	Some Value	Little Value	No Value	Don't Know	Total
Designing a city in SIMCity	Frequency	*160*	*104*	51	13	2	330
	Percent	*46.1*	*30.0*	14.7	3.7	.6	95.1
The essay	Frequency	*199*	*111*	14	2	5	331
	Percent	*57.3*	*32.0*	4.0	.6	1.4	95.4
Building a model	Frequency	*259*	*60*	1	2	8	330
	Percent	*74.6*	*17.3*	.3	.6	2.3	95.1
Working in a team	Frequency	*288*	*38*	4	1	1	332
	Percent	*83.0*	*11.0*	1.2	.3	.3	95.7
Working with a mentor	Frequency	*179*	*74*	20	14	44	331
	Percent	*51.6*	*21.3*	5.8	4.0	12.7	95.4
Preparing a presentation	Frequency	*244*	*69*	8	3	8	332
	Percent	*70.3*	*19.9*	2.3	.9	2.3	95.7
Delivering a presentation	Frequency	*265*	*47*	6	2	12	332
	Percent	*76.4*	*13.5*	1.7	.6	3.5	95.7
The competition	Frequency	*255*	*43*	6	4	22	330
	Percent	*73.5*	*12.4*	1.7	1.2	6.3	95.1

Table G-3:
Proportion of Schools that Used the Learning Blocks

	Frequency	Percent
Yes	116	33.4
No	205	59.1
Missing	26	7.5
Total	347	100.0

Table G-4:

Perceived Value of New or Revised Future City Resources, from Teacher Perspective

		Very Helpful	Helpful	A Little Helpful	Not Helpful	Didn't Use	Total
The new FutureCity.org	Frequency	*146*	*121*	40	13	2	322
	Percent	*42.1*	*34.9*	11.5	3.7	.6	92.8
The new handbook	Frequency	*157*	*120*	25	11	9	322
	Percent	*45.2*	*34.6*	7.2	3.2	2.6	92.8
The new Learning Blocks	Frequency	45	53	15	2	*208*	323
	Percent	13.0	15.3	4.3	.6	*59.9*	93.1
The new online calendar program	Frequency	57	*88*	64	19	*91*	319
	Percent	16.4	*25.4*	18.4	5.5	*26.2*	91.9

Table G-5:

The Extent to Which Future City Met Teacher Expectations this Year

	Frequency	Percent
Exceeded my expectations	82	23.6
Fully met my expectations	182	52.4
Partially met my expectations	43	12.4
Did not meet my expectations	15	4.3
Missing	25	7.2
Total	347	100.0

Regional Data

Table G-6:
Future City Participation, by Region

Region		Counting this year, how many times have you participated in Future City?	How many students in your organization participated in Future City this year?	How many teams did you have this year?	How many teams went to the competition this year?
Alabama	Mean	1.2500	14.50	1.75	1.50
	N	4	4	4	4
	Std. Deviation	.50000	5.323	.957	.577
Arizona	Mean	3.5714	25.29	8.07	4.86
	N	14	14	14	14
	Std. Deviation	3.17961	16.107	5.298	2.825
California	Mean	1.4000	7.80	1.20	.80
	N	5	5	5	5
	Std. Deviation	.54772	5.310	.447	.837
Colorado	Mean	2.0000	75.00	10.00	.00
	N	1	1	1	1
	Std. Deviation	.	.	.	.
Florida (South)	Mean	1.5833	22.18	4.00	.82
	N	12	11	11	11
	Std. Deviation	.99620	22.921	5.477	.603
Florida (Tampa Bay)	Mean	2.2857	77.00	8.14	1.86
	N	7	7	7	7
	Std. Deviation	1.88982	65.714	9.788	.690
Georgia	Mean	2.6296	21.25	5.80	5.04
	N	27	24	25	25
	Std. Deviation	3.70185	23.133	6.633	6.471
Great Plains	Mean	2.9615	10.92	1.96	2.12
	N	26	26	26	26
	Std. Deviation	1.63660	10.635	1.637	2.688
Idaho	Mean	2.9000	19.80	2.70	1.90
	N	10	10	10	10
	Std. Deviation	1.28668	15.047	2.359	.876
Illinois (Chicago)	Mean	2.8333	7.00	1.17	1.17
	N	6	6	6	6

Region		Counting this year, how many times have you participated in Future City?	How many students in your organization participated in Future City this year?	How many teams did you have this year?	How many teams went to the competition this year?
	Std. Deviation	.98319	3.406	.408	.408
Indiana	Mean	6.7143	75.57	13.57	1.86
	N	7	7	7	7
	Std. Deviation	4.57217	124.209	27.220	1.069
Iowa	Mean	2.2000	21.30	6.40	2.50
	N	10	10	10	10
	Std. Deviation	3.15524	21.965	6.222	1.780
Kentucky	Mean	1.0000	7.50	1.50	.50
	N	2	2	2	2
	Std. Deviation	.00000	2.121	.707	.707
Michigan	Mean	6.3000	17.60	2.50	1.40
	N	10	10	10	10
	Std. Deviation	4.34741	11.787	4.089	.843
Mid-Atlantic	Mean	2.5714	15.29	2.29	1.29
	N	7	7	7	7
	Std. Deviation	1.81265	7.365	1.604	.951
Minnesota	Mean	2.3636	20.18	4.64	2.09
	N	11	11	11	11
	Std. Deviation	1.91169	17.285	5.409	.701
Nebraska	Mean	2.6000	20.20	5.60	1.60
	N	5	5	5	5
	Std. Deviation	1.14018	28.164	9.182	1.140
Nevada (Southern)	Mean	3.0000	15.67	4.11	2.11
	N	9	9	9	9
	Std. Deviation	4.00000	10.920	3.887	1.364
New England	Mean	3.0909	24.55	3.70	.80
	N	11	11	10	10
	Std. Deviation	2.62505	27.858	5.208	.632
New Jersey	Mean	3.4000	18.95	4.15	2.70
	N	20	20	20	20
	Std. Deviation	2.60364	12.433	4.120	1.809
New York (Albany)	Mean	6.2500	13.75	1.25	1.25
	N	8	8	8	8

Region		Counting this year, how many times have you participated in Future City?	How many students in your organization participated in Future City this year?	How many teams did you have this year?	How many teams went to the competition this year?
	Std. Deviation	3.10530	10.990	.707	.707
New York (City)	Mean	3.4286	28.57	8.43	3.57
	N	7	7	7	7
	Std. Deviation	2.07020	31.495	10.228	4.036
New York (Western)	Mean	8.3333	12.67	1.33	1.33
	N	9	9	9	9
	Std. Deviation	5.33854	7.984	.707	.707
North Carolina	Mean	2.6250	22.50	1.13	.88
	N	8	8	8	8
	Std. Deviation	1.06066	28.445	.354	.641
Ohio	Mean	4.2500	13.50	1.75	.83
	N	12	12	12	12
	Std. Deviation	3.98006	8.723	2.598	.389
Oklahoma	Mean	1.6667	13.83	2.33	1.17
	N	6	6	6	6
	Std. Deviation	1.21106	18.038	1.966	1.472
Pennsylvania (Central)	Mean	2.7273	11.64	1.55	1.00
	N	11	11	11	11
	Std. Deviation	1.95402	6.470	1.036	.447
Pennsylvania (Philadelphia)	Mean	4.3636	18.14	2.00	.91
	N	22	22	22	22
	Std. Deviation	4.46729	11.878	2.526	.294
Pennsylvania (Pittsburgh)	Mean	6.2000	12.70	1.00	1.00
	N	10	10	10	9
	Std. Deviation	4.31535	7.025	.000	.000
South Carolina	Mean	3.5000	27.33	5.50	1.67
	N	6	6	6	6
	Std. Deviation	3.72827	27.274	6.253	1.506
Texas (Central)	Mean	2.5000	22.75	4.25	4.25
	N	4	4	4	4
	Std. Deviation	1.00000	21.762	3.948	3.948
Texas (Houston)	Mean	2.6667	10.00	1.33	1.33
	N	6	6	6	6

Region		Counting this year, how many times have you participated in Future City?	How many students in your organization participated in Future City this year?	How many teams did you have this year?	How many teams went to the competition this year?
	Std. Deviation	3.61478	5.329	.816	1.366
Texas (North)	Mean	3.8333	15.83	2.17	1.83
	N	12	12	12	12
	Std. Deviation	3.61395	12.939	2.082	1.801
Virginia	Mean	3.2857	11.71	2.86	1.57
	N	7	7	7	7
	Std. Deviation	3.94606	9.604	3.532	1.618
Washington	Mean	3.1429	33.71	8.86	2.29
	N	7	7	7	7
	Std. Deviation	2.79455	52.002	14.029	1.976
Wisconsin	Mean	2.2500	39.13	7.75	2.88
	N	8	8	8	8
	Std. Deviation	1.38873	85.461	15.926	2.850
Total	Mean	3.4236	20.80	3.88	2.04
	N	347	343	343	342
	Std. Deviation	3.27661	30.805	6.710	2.609

Table G-7:
Schools that Offer Future City as a Club, by Region

	Club
Arizona	5
California	4
Florida (South)	6
Florida (Tampa Bay)	1
Georgia	15
Great Plains	1
Idaho	5
Illinois (Chicago)	5
Indiana	4
Iowa	2
Kentucky	1
Michigan	7
Mid-Atlantic	5
Minnesota	5
Nebraska	3
Nevada (Southern)	3
New England	7
New Jersey	15
New York (Albany)	7
New York (City)	4
New York (Western)	8
North Carolina	4
Ohio	8
Oklahoma	4
Pennsylvania (Central)	7
Pennsylvania (Philadelphia)	10
Pennsylvania (Pittsburgh)	5
South Carolina	2
Texas (Central)	3
Texas (Houston)	4
Texas (North)	8
Virginia	5
Washington	1
Wisconsin	7

Table G-8:
Schools that Offer Future City as a Club, by Region

	Course
Alabama	4
Arizona	10
California	2
Colorado	1
Florida (South)	6
Florida (Tampa Bay)	7
Georgia	10
Great Plains	23
Idaho	5
Indiana	4
Iowa	8
Kentucky	1
Michigan	5
Mid-Atlantic	3
Minnesota	6
Nebraska	2
Nevada (Southern)	5
New England	3
New Jersey	8
New York (Albany)	1
New York (City)	4
New York (Western)	2
North Carolina	4
Ohio	3
Oklahoma	2
Pennsylvania (Central)	5
Pennsylvania (Philadelphia)	9
Pennsylvania (Pittsburgh)	6
South Carolina	3
Texas (Central)	1
Texas (Houston)	1
Texas (North)	4
Virginia	3
Washington	6
Wisconsin	1

Table G-9:
Hours Dedicated to Future City, by Region

Region		For the students in the competition please estimate the total number of hours the average student worked on Future City from start to finish:	For the students who did NOT go to the competition, please estimate the number of hours the average student worked on Future City from start to finish:	Please estimate the number of hours YOU worked on Future City this academic year (2011-2012) from start to finish:
Alabama	Mean	40.00	40.00	48.33
	N	3	3	3
	Std. Deviation	26.458	26.458	22.546
Arizona	Mean	84.08	70.64	136.38
	N	13	11	13
	Std. Deviation	72.665	82.550	136.534
California	Mean	73.33	41.33	60.00
	N	3	3	4
	Std. Deviation	23.094	38.018	37.417
Colorado	Mean		7.00	20.00
	N		1	1
	Std. Deviation		.	.
Florida (South)	Mean	27.89	19.88	58.89
	N	9	8	9
	Std. Deviation	16.344	11.231	74.769
Florida (Tampa Bay)	Mean	95.14	75.00	76.43
	N	7	7	7
	Std. Deviation	48.099	46.278	29.399
Georgia	Mean	69.17	49.72	82.33
	N	24	18	24
	Std. Deviation	49.234	60.886	67.571
Great Plains	Mean	250.78	266.90	232.32
	N	23	20	25
	Std. Deviation	926.828	996.771	910.409
Idaho	Mean	49.40	57.50	81.78
	N	10	8	9

Region		For the students in the competition please estimate the total number of hours the average student worked on Future City from start to finish:	For the students who did NOT go to the competition, please estimate the number of hours the average student worked on Future City from start to finish:	Please estimate the number of hours YOU worked on Future City this academic year (2011-2012) from start to finish:
	Std. Deviation	23.810	63.189	71.158
Illinois (Chicago)	Mean	50.00	31.67	48.00
	N	5	3	5
	Std. Deviation	28.504	12.583	32.901
Indiana	Mean	95.00	65.60	108.33
	N	5	5	6
	Std. Deviation	38.079	31.093	53.448
Iowa	Mean	94.75	60.44	95.50
	N	8	9	10
	Std. Deviation	64.069	39.281	70.577
Kentucky	Mean	50.00	42.50	62.50
	N	2	2	2
	Std. Deviation	35.355	24.749	53.033
Michigan	Mean	51.78	34.00	74.78
	N	9	8	9
	Std. Deviation	29.706	27.129	25.602
Mid-Atlantic	Mean	290.00	275.00	285.83
	N	6	6	6
	Std. Deviation	593.380	600.267	594.865
Minnesota	Mean	50.70	37.00	64.80
	N	10	7	10
	Std. Deviation	20.467	18.673	20.010
Nebraska	Mean	53.33	27.75	53.50
	N	3	4	4
	Std. Deviation	15.275	15.064	58.370
Nevada (Southern)	Mean	64.00	40.00	72.63
	N	8	5	8
	Std. Deviation	51.069	37.249	78.709

Region		For the students in the competition please estimate the total number of hours the average student worked on Future City from start to finish:	For the students who did NOT go to the competition, please estimate the number of hours the average student worked on Future City from start to finish:	Please estimate the number of hours YOU worked on Future City this academic year (2011-2012) from start to finish:
New England	Mean	37.50	23.30	51.82
	N	10	10	11
	Std. Deviation	18.447	19.236	25.620
New Jersey	Mean	64.50	40.17	70.30
	N	18	18	20
	Std. Deviation	29.786	22.948	42.107
New York (Albany)	Mean	43.75	25.33	68.86
	N	8	6	7
	Std. Deviation	21.835	14.989	36.113
New York (City)	Mean	46.86	27.00	51.43
	N	7	4	7
	Std. Deviation	17.392	8.524	10.690
New York (Western)	Mean	61.22	42.83	82.22
	N	9	6	9
	Std. Deviation	58.819	41.518	50.690
North Carolina	Mean	46.88	34.38	75.00
	N	8	8	8
	Std. Deviation	22.510	30.331	47.434
Ohio	Mean	77.73	55.45	76.25
	N	11	11	12
	Std. Deviation	48.804	51.557	50.862
Oklahoma	Mean	65.00	46.25	81.67
	N	5	4	6
	Std. Deviation	38.406	39.025	110.529
Pennsylvania (Central)	Mean	61.50	43.00	72.27
	N	10	11	11
	Std. Deviation	36.670	32.573	31.174
Pennsylvania (Philadelphia)	Mean	56.39	43.24	71.11

Region		For the students in the competition please estimate the total number of hours the average student worked on Future City from start to finish:	For the students who did NOT go to the competition, please estimate the number of hours the average student worked on Future City from start to finish:	Please estimate the number of hours YOU worked on Future City this academic year (2011-2012) from start to finish:
	N	18	17	18
	Std. Deviation	64.233	67.267	65.272
Pennsylvania (Pittsburgh)	Mean	55.50	37.30	68.70
	N	10	10	10
	Std. Deviation	25.761	30.689	34.241
South Carolina	Mean	65.00	51.25	75.83
	N	5	4	6
	Std. Deviation	22.913	27.801	15.626
Texas (Central)	Mean	55.00	72.50	75.00
	N	3	2	3
	Std. Deviation	40.927	38.891	65.383
Texas (Houston)	Mean	48.00	18.33	63.33
	N	5	6	6
	Std. Deviation	23.611	9.832	32.042
Texas (North)	Mean	48.00	32.29	49.09
	N	10	7	11
	Std. Deviation	34.976	17.792	34.483
Virginia	Mean	69.17	50.83	70.71
	N	6	6	7
	Std. Deviation	41.643	50.850	41.975
Washington	Mean	117.33	66.17	172.33
	N	6	6	6
	Std. Deviation	62.134	22.167	68.181
Wisconsin	Mean	73.57	60.00	69.29
	N	7	5	7
	Std. Deviation	25.935	38.079	35.170

Table G-10:
Perceived Impact on Students, by Region

Region		…problem solving skills.	…ability to work in teams.	…comfort working in a self-directed manner.	…research and writing skills.	…project management skills.	…oral presentation skills.	…understanding of engineering.
Alabama	Mean	2.0000	3.0000	2.2500	2.0000	2.5000	2.5000	2.6667
	N	4	4	4	4	4	4	3
	Std. Deviation	.81650	.81650	.95743	.81650	.57735	1.29099	1.52753
Arizona	Mean	3.3077	3.2857	3.0000	3.0000	2.9286	3.2143	3.1429
	N	13	14	14	14	14	14	14
	Std. Deviation	.63043	.91387	.96077	.55470	.82874	.80178	.94926
California	Mean	3.2500	3.0000	3.0000	3.0000	2.7500	3.0000	3.0000
	N	4	4	4	4	4	4	3
	Std. Deviation	.95743	.81650	.81650	.81650	.95743	.81650	1.00000
Colorado	Mean	2.0000	1.0000	1.0000	2.0000	1.0000	1.0000	2.0000
	N	1	1	1	1	1	1	1
	Std. Deviation	.	.	.	.	.	.	.
Florida (South)	Mean	3.3636	3.4000	2.8889	2.8182	3.0909	3.0000	3.1818
	N	11	10	9	11	11	10	11
	Std. Deviation	.67420	.69921	.60093	.40452	.53936	.66667	.75076
Florida (Tampa Bay)	Mean	2.8571	3.4286	2.8571	2.8571	2.8571	2.8571	3.1429
	N	7	7	7	7	7	7	7
	Std. Deviation	.37796	.53452	.37796	.69007	.69007	.37796	.69007
Georgia	Mean	3.2917	3.1600	3.1200	2.9583	3.1667	3.3200	3.2000
	N	24	25	25	24	24	25	25
	Std. Deviation	.55003	.74610	.78102	.69025	.63702	.62716	.70711
Great Plains	Mean	2.9615	3.2308	2.6923	2.8400	2.8800	3.0800	3.2308
	N	26	26	26	25	25	25	26
	Std. Deviation	.72004	.86291	.83758	.74610	.72572	.81240	.76460
Idaho	Mean	3.1000	3.0000	2.9000	2.8000	2.9000	3.0000	3.4000
	N	10	10	10	10	10	10	10
	Std. Deviation	.56765	.81650	.56765	.42164	.73786	.66667	.84327
Illinois (Chicago)	Mean	3.5000	3.6667	3.3333	3.0000	3.0000	3.1667	3.3333
	N	6	6	6	6	6	6	6
	Std. Deviation	.54772	.51640	.51640	.89443	.89443	.98319	.51640
Indiana	Mean	3.1667	3.6667	2.6667	2.8333	3.5000	3.1667	3.1667

Region		…problem solving skills.	…ability to work in teams.	…comfort working in a self-directed manner.	…research and writing skills.	…project management skills.	…oral presentation skills.	…understanding of engineering.
	N	6	6	6	6	6	6	6
	Std. Deviation	.40825	.51640	.51640	.40825	.54772	.98319	.75277
Iowa	Mean	3.3333	3.2222	2.8889	2.7778	3.1111	2.8889	3.3333
	N	9	9	9	9	9	9	9
	Std. Deviation	.70711	.66667	1.05409	.97183	.78174	1.16667	.86603
Kentucky	Mean	3.0000	2.5000	2.0000	3.0000	2.0000	3.0000	3.0000
	N	2	2	2	1	2	1	1
	Std. Deviation	.00000	.70711	1.41421	.	1.41421	.	.
Michigan	Mean	3.2222	3.3333	2.7500	2.8889	3.1111	3.5556	3.2222
	N	9	9	8	9	9	9	9
	Std. Deviation	.44096	.50000	.88641	.78174	.60093	.72648	.44096
Mid-Atlantic	Mean	2.8333	2.5000	2.3333	3.0000	3.0000	2.8333	3.1667
	N	6	6	6	6	6	6	6
	Std. Deviation	.75277	.83666	.81650	.63246	.63246	.75277	.75277
Minnesota	Mean	3.0000	2.8182	2.9091	2.9091	2.9091	3.1818	3.2000
	N	11	11	11	11	11	11	10
	Std. Deviation	.44721	.87386	.70065	.94388	.53936	.60302	.63246
Nebraska	Mean	3.0000	3.2000	3.2000	2.6000	2.8000	2.4000	3.2000
	N	5	5	5	5	5	5	5
	Std. Deviation	.70711	.83666	.83666	.89443	.83666	1.14018	.83666
Nevada (Southern)	Mean	3.3750	3.5000	3.3750	3.0000	3.3750	3.3750	3.1250
	N	8	8	8	8	8	8	8
	Std. Deviation	.51755	.53452	.74402	.75593	.74402	.51755	.83452
New England	Mean	3.0000	3.1818	3.0000	2.2727	2.8182	2.3636	3.0000
	N	10	11	11	11	11	11	11
	Std. Deviation	.47140	.75076	.44721	.78625	.98165	1.02691	.77460
New Jersey	Mean	3.3158	3.5789	3.3684	3.1579	3.5263	3.3684	3.5000
	N	19	19	19	19	19	19	18
	Std. Deviation	.58239	.50726	.59726	.83421	.61178	.68399	.61835
New York (Albany)	Mean	3.0000	3.5000	2.7500	2.5000	2.6250	2.6250	3.2500
	N	8	8	8	8	8	8	8
	Std. Deviation	.00000	.53452	.70711	.75593	.74402	.74402	.46291
New York (City)	Mean	3.1429	3.0000	2.7143	2.5714	2.6667	3.2857	3.3333
	N	7	7	7	7	6	7	6

Region		…problem solving skills.	…ability to work in teams.	…comfort working in a self-directed manner.	…research and writing skills.	…project management skills.	…oral presentation skills.	…understanding of engineering.
	Std. Deviation	1.06904	1.00000	.75593	.97590	1.03280	.75593	.51640
New York (Western)	Mean	3.0000	3.3333	2.8889	3.2222	2.7778	3.1111	3.4444
	N	9	9	9	9	9	9	9
	Std. Deviation	.00000	.50000	.60093	.66667	.44096	.33333	.52705
North Carolina	Mean	3.0000	3.0000	2.2500	2.3750	2.7500	2.5000	2.6250
	N	8	8	8	8	8	8	8
	Std. Deviation	.75593	.92582	.46291	.91613	.46291	.75593	.74402
Ohio	Mean	3.2727	3.2500	2.7500	2.8333	2.7500	2.9167	3.0000
	N	11	12	12	12	12	12	12
	Std. Deviation	.64667	.62158	.86603	.57735	.45227	.90034	.42640
Oklahoma	Mean	3.1667	3.3333	3.0000	3.0000	3.3333	3.2000	3.1667
	N	6	6	6	6	6	5	6
	Std. Deviation	.40825	.81650	.63246	.89443	.51640	1.09545	.75277
Pennsylvania (Central)	Mean	3.3636	3.1818	3.1818	2.7273	3.0909	3.1818	3.2727
	N	11	11	11	11	11	11	11
	Std. Deviation	.50452	.60302	.60302	.78625	.83121	.60302	.46710
Pennsylvania (Philadelphia)	Mean	3.0476	3.5714	3.0000	2.8571	2.8095	3.2381	3.1500
	N	21	21	21	21	21	21	20
	Std. Deviation	.66904	.59761	.77460	.79282	.67964	.76842	.81273
Pennsylvania (Pittsburgh)	Mean	3.7000	3.5000	3.3000	2.9000	3.3000	3.4000	3.8000
	N	10	10	10	10	10	10	10
	Std. Deviation	.48305	.52705	.67495	.56765	.67495	.69921	.42164
South Carolina	Mean	3.5000	3.5000	3.3333	3.3333	3.3333	3.3333	3.1667
	N	6	6	6	6	6	6	6
	Std. Deviation	.54772	.54772	.51640	.51640	.51640	.51640	.75277
Texas (Central)	Mean	3.5000	3.5000	3.5000	3.0000	3.2500	3.5000	3.2500
	N	4	4	4	4	4	4	4
	Std. Deviation	.57735	.57735	.57735	.81650	.50000	.57735	.50000
Texas (Houston)	Mean	3.3333	3.1667	2.8333	2.8333	2.6667	3.0000	3.0000
	N	6	6	6	6	6	6	6
	Std. Deviation	.51640	.40825	.75277	1.16905	1.36626	.89443	.63246
Texas (North)	Mean	3.0000	3.5000	2.8000	2.9000	3.1000	3.2000	3.3000
	N	9	10	10	10	10	10	10
	Std. Deviation	.50000	.70711	.42164	.73786	.73786	.91894	.67495

Region		…problem solving skills.	…ability to work in teams.	…comfort working in a self-directed manner.	…research and writing skills.	…project management skills.	…oral presentation skills.	…understanding of engineering.
Virginia	Mean	3.3333	3.2857	3.0000	2.7143	2.8571	2.8571	3.3333
	N	6	7	7	7	7	7	6
	Std. Deviation	.51640	.75593	.81650	1.38013	1.06904	1.34519	.51640
Washington	Mean	3.1429	3.5714	3.0000	3.1429	3.1429	3.1429	3.2857
	N	7	7	7	7	7	7	7
	Std. Deviation	.69007	.53452	.57735	.69007	.69007	.89974	.75593
Wisconsin	Mean	3.0000	3.6667	2.8333	2.6667	3.5000	3.5000	3.0000
	N	6	6	6	6	6	6	5
	Std. Deviation	.63246	.51640	.75277	.51640	.54772	.54772	.70711

Table G-11:
Perceived Value of Components, by Region

Region		Designing a city in SimCity	The essay	Building a model	Working in a team
Alabama	Mean	2.3333	3.0000	3.6667	4.0000
	N	3	3	3	3
	Std. Deviation	1.52753	1.00000	.57735	.00000
Arizona	Mean	3.4286	3.7143	3.7143	3.5714
	N	14	14	14	14
	Std. Deviation	.64621	.46881	.61125	.64621
California	Mean	3.6667	4.0000	4.0000	4.0000
	N	3	3	3	3
	Std. Deviation	.57735	.00000	.00000	.00000
Colorado	Mean	3.0000	2.0000		3.0000
	N	1	1		1
	Std. Deviation	.	.		.
Florida (South)	Mean	3.4545	3.3000	3.8000	3.9091
	N	11	10	10	11
	Std. Deviation	1.03573	.67495	.42164	.30151
Florida (Tampa Bay)	Mean	3.0000	3.7143	4.0000	4.0000
	N	7	7	7	7
	Std. Deviation	.81650	.48795	.00000	.00000
Georgia	Mean	3.0000	3.6250	3.8000	3.9200
	N	25	24	25	25
	Std. Deviation	.91287	.49454	.40825	.27689
Great Plains	Mean	3.1200	3.3462	3.5000	3.6538
	N	25	26	26	26
	Std. Deviation	.92736	.84580	.86023	.68948
Idaho	Mean	3.0000	3.4000	3.7000	3.8000
	N	10	10	10	10
	Std. Deviation	.94281	.69921	.48305	.42164
Illinois (Chicago)	Mean	3.6000	3.8000	4.0000	4.0000
	N	5	5	5	5
	Std. Deviation	.54772	.44721	.00000	.00000
Indiana	Mean	3.3333	3.3333	4.0000	4.0000
	N	6	6	5	6
	Std. Deviation	.81650	.51640	.00000	.00000
Iowa	Mean	3.3333	3.5000	3.8889	4.0000

Region		Designing a city in SimCity	The essay	Building a model	Working in a team
	N	9	8	9	9
	Std. Deviation	1.00000	.53452	.33333	.00000
Kentucky	Mean	4.0000	4.0000	3.5000	4.0000
	N	2	2	2	2
	Std. Deviation	.00000	.00000	.70711	.00000
Michigan	Mean	3.0000	3.6000	3.8889	3.9000
	N	8	10	9	10
	Std. Deviation	1.19523	.51640	.33333	.31623
Mid-Atlantic	Mean	3.8333	3.3333	3.6667	3.5000
	N	6	6	6	6
	Std. Deviation	.40825	.81650	.51640	.83666
Minnesota	Mean	3.2727	3.5455	3.6364	3.7273
	N	11	11	11	11
	Std. Deviation	.64667	.68755	.50452	.64667
Nebraska	Mean	3.2000	3.4000	3.5000	3.8000
	N	5	5	4	5
	Std. Deviation	1.30384	.54772	.57735	.44721
Nevada (Southern)	Mean	3.3750	3.5000	3.8750	4.0000
	N	8	8	8	8
	Std. Deviation	.91613	.75593	.35355	.00000
New England	Mean	2.9091	3.4545	3.4545	3.7273
	N	11	11	11	11
	Std. Deviation	1.13618	.68755	.52223	.46710
New Jersey	Mean	3.6500	3.6842	3.8000	3.9000
	N	20	19	20	20
	Std. Deviation	.58714	.47757	.41039	.30779
New York (Albany)	Mean	3.2500	3.7500	3.6250	3.8750
	N	8	8	8	8
	Std. Deviation	.46291	.46291	.51755	.35355
New York (City)	Mean	3.1429	3.5714	3.8571	3.7143
	N	7	7	7	7
	Std. Deviation	.89974	.53452	.37796	.75593
New York (Western)	Mean	2.5556	3.7778	3.8889	4.0000
	N	9	9	9	9
	Std. Deviation	.88192	.44096	.33333	.00000
North Carolina	Mean	3.0000	3.8750	3.7500	3.6250
	N	8	8	8	8

Region		Designing a city in SimCity	The essay	Building a model	Working in a team
	Std. Deviation	1.06904	.35355	.46291	.51755
Ohio	Mean	3.1667	3.2500	3.9091	3.8333
	N	12	12	11	12
	Std. Deviation	.71774	.86603	.30151	.38925
Oklahoma	Mean	3.5000	3.6667	4.0000	4.0000
	N	6	6	5	6
	Std. Deviation	.54772	.51640	.00000	.00000
Pennsylvania (Central)	Mean	3.4545	3.5455	3.9091	3.9091
	N	11	11	11	11
	Std. Deviation	.68755	.68755	.30151	.30151
Pennsylvania (Philadelphia)	Mean	3.1905	3.7143	3.8500	3.9524
	N	21	21	20	21
	Std. Deviation	.92839	.46291	.36635	.21822
Pennsylvania (Pittsburgh)	Mean	3.2000	3.6000	4.0000	4.0000
	N	10	10	10	10
	Std. Deviation	.91894	.51640	.00000	.00000
South Carolina	Mean	3.5000	3.8333	3.8333	4.0000
	N	6	6	6	6
	Std. Deviation	.83666	.40825	.40825	.00000
Texas (Central)	Mean	2.7500	3.5000	4.0000	4.0000
	N	4	4	4	4
	Std. Deviation	.50000	.57735	.00000	.00000
Texas (Houston)	Mean	3.5000	3.5000	3.8333	4.0000
	N	6	6	6	6
	Std. Deviation	.83666	.54772	.40825	.00000
Texas (North)	Mean	3.8000	3.6000	4.0000	3.9000
	N	10	10	10	10
	Std. Deviation	.63246	.69921	.00000	.31623
Virginia	Mean	3.5714	3.5000	3.6667	3.7143
	N	7	6	6	7
	Std. Deviation	.53452	.54772	.51640	.48795
Washington	Mean	2.8571	3.4286	3.7143	3.7143
	N	7	7	7	7
	Std. Deviation	.89974	.78680	.48795	.48795
Wisconsin	Mean	3.6667	3.5000	4.0000	4.0000
	N	6	6	6	6
	Std. Deviation	.81650	.54772	.00000	.00000

Table G-12:
Perceived Value of Components (Continued), by Region

Region		Working with a mentor	Preparing a presentation	Delivering a presentation	The competition
Alabama	Mean	2.6667	3.0000	3.0000	3.3333
	N	3	3	3	3
	Std. Deviation	1.52753	1.00000	1.00000	.57735
Arizona	Mean	3.4545	3.7143	3.7143	3.6429
	N	11	14	14	14
	Std. Deviation	.82020	.61125	.61125	.63332
California	Mean	3.5000	4.0000	4.0000	3.6667
	N	2	3	3	3
	Std. Deviation	.70711	.00000	.00000	.57735
Florida (South)	Mean	4.0000	3.5000	3.8000	3.9000
	N	7	10	10	10
	Std. Deviation	.00000	.52705	.42164	.31623
Florida (Tampa Bay)	Mean	3.0000	3.8571	4.0000	3.7143
	N	6	7	7	7
	Std. Deviation	1.09545	.37796	.00000	.48795
Georgia	Mean	3.5600	3.8000	3.8800	3.8000
	N	25	25	25	25
	Std. Deviation	.58310	.40825	.33166	.64550
Great Plains	Mean	3.1818	3.5385	3.5385	3.5600
	N	22	26	26	25
	Std. Deviation	.90692	.85934	.85934	.86987
Idaho	Mean	3.5000	3.5000	3.5000	3.7000
	N	10	10	10	10
	Std. Deviation	.97183	.52705	.52705	.48305
Illinois (Chicago)	Mean	4.0000	3.6000	3.8000	4.0000
	N	3	5	5	5
	Std. Deviation	.00000	.54772	.44721	.00000
Indiana	Mean	3.7500	3.5000	3.8333	4.0000
	N	4	6	6	5
	Std. Deviation	.50000	.54772	.40825	.00000
Iowa	Mean	3.6250	3.8750	4.0000	4.0000
	N	8	8	7	7
	Std. Deviation	.51755	.35355	.00000	.00000
Kentucky	Mean	3.0000	4.0000	4.0000	4.0000

Region		Working with a mentor	Preparing a presentation	Delivering a presentation	The competition
	N	2	2	2	2
	Std. Deviation	1.41421	.00000	.00000	.00000
Michigan	Mean	3.2000	3.8000	3.8000	4.0000
	N	10	10	10	10
	Std. Deviation	.91894	.42164	.42164	.00000
Mid-Atlantic	Mean	3.2000	3.6667	3.6667	3.5000
	N	5	6	6	6
	Std. Deviation	1.30384	.51640	.51640	.54772
Minnesota	Mean	3.6364	3.6364	3.7273	4.0000
	N	11	11	11	11
	Std. Deviation	.67420	.92442	.64667	.00000
Nebraska	Mean	3.3333	3.7500	3.7500	3.7500
	N	3	4	4	4
	Std. Deviation	1.15470	.50000	.50000	.50000
Nevada (Southern)	Mean	3.2000	3.6250	4.0000	4.0000
	N	5	8	8	8
	Std. Deviation	1.30384	.51755	.00000	.00000
New England	Mean	2.7143	3.3636	3.7273	3.6667
	N	7	11	11	9
	Std. Deviation	1.11270	.80904	.46710	.50000
New Jersey	Mean	3.6471	3.8000	3.8421	3.8333
	N	17	20	19	18
	Std. Deviation	.60634	.41039	.37463	.51450
New York (Albany)	Mean	3.1429	3.5000	3.7500	3.5000
	N	7	8	8	8
	Std. Deviation	1.21499	.75593	.46291	.53452
New York (City)	Mean	2.4000	3.5714	3.7143	3.8571
	N	5	7	7	7
	Std. Deviation	1.34164	.78680	.75593	.37796
New York (Western)	Mean	3.5556	3.8889	3.8889	3.8889
	N	9	9	9	9
	Std. Deviation	.72648	.33333	.33333	.33333
North Carolina	Mean	3.7143	3.7143	4.0000	3.8333
	N	7	7	7	6
	Std. Deviation	.48795	.48795	.00000	.40825
Ohio	Mean	3.7273	3.5833	3.7000	3.8000
	N	11	12	10	10

Region		Working with a mentor	Preparing a presentation	Delivering a presentation	The competition
	Std. Deviation	.64667	.66856	.67495	.42164
Oklahoma	Mean	3.8000	4.0000	4.0000	4.0000
	N	5	5	5	4
	Std. Deviation	.44721	.00000	.00000	.00000
Pennsylvania (Central)	Mean	3.5000	3.9091	3.9091	3.8750
	N	10	11	11	8
	Std. Deviation	.84984	.30151	.30151	.35355
Pennsylvania (Philadelphia)	Mean	3.6667	3.7619	3.8571	3.6000
	N	21	21	21	20
	Std. Deviation	.57735	.43644	.35857	.82078
Pennsylvania (Pittsburgh)	Mean	4.0000	4.0000	4.0000	3.9000
	N	7	10	10	10
	Std. Deviation	.00000	.00000	.00000	.31623
South Carolina	Mean	3.3333	4.0000	4.0000	4.0000
	N	6	6	6	5
	Std. Deviation	.51640	.00000	.00000	.00000
Texas (Central)	Mean	3.5000	3.7500	3.7500	4.0000
	N	4	4	4	4
	Std. Deviation	1.00000	.50000	.50000	.00000
Texas (Houston)	Mean	3.1667	3.6667	3.6667	3.8333
	N	6	6	6	6
	Std. Deviation	.98319	.51640	.51640	.40825
Texas (North)	Mean	3.7000	3.7000	3.8000	3.9000
	N	10	10	10	10
	Std. Deviation	.48305	.67495	.63246	.31623
Virginia	Mean	3.2000	3.8333	3.8333	3.8333
	N	5	6	6	6
	Std. Deviation	1.30384	.40825	.40825	.40825
Washington	Mean	3.1429	3.7143	3.7143	3.4286
	N	7	7	7	7
	Std. Deviation	1.21499	.48795	.48795	1.13389
Wisconsin	Mean	3.6667	4.0000	4.0000	3.8333
	N	6	6	6	6
	Std. Deviation	.51640	.00000	.00000	.40825

Table G-13:
Whether Schools had Mentors, by Region

		Yes	No	Part-time	
Alabama	Count	2	1	0	3
	% within Region	66.7%	33.3%	.0%	100.0%
Arizona	Count	8	3	3	14
	% within Region	57.1%	21.4%	21.4%	100.0%
California	Count	2	2	0	4
	% within Region	50.0%	50.0%	.0%	100.0%
Colorado	Count	0	1	0	1
	% within Region	.0%	100.0%	.0%	100.0%
Florida (South)	Count	6	6	0	12
	% within Region	50.0%	50.0%	.0%	100.0%
Florida (Tampa Bay)	Count	3	2	2	7
	% within Region	42.9%	28.6%	28.6%	100.0%
Georgia	Count	17	0	8	25
	% within Region	68.0%	.0%	32.0%	100.0%
Great Plains	Count	15	9	2	26
	% within Region	57.7%	34.6%	7.7%	100.0%
Idaho	Count	9	0	1	10
	% within Region	90.0%	.0%	10.0%	100.0%
Illinois (Chicago)	Count	2	2	1	5
	% within Region	40.0%	40.0%	20.0%	100.0%
Indiana	Count	3	2	1	6
	% within Region	50.0%	33.3%	16.7%	100.0%
Iowa	Count	5	3	1	9
	% within Region	55.6%	33.3%	11.1%	100.0%
Kentucky	Count	1	1	0	2
	% within Region	50.0%	50.0%	.0%	100.0%
Michigan	Count	5	1	4	10
	% within Region	50.0%	10.0%	40.0%	100.0%
Mid-Atlantic	Count	4	1	1	6
	% within Region	66.7%	16.7%	16.7%	100.0%
Minnesota	Count	11	0	0	11
	% within Region	100.0%	.0%	.0%	100.0%
Nebraska	Count	3	2	0	5
	% within Region	60.0%	40.0%	.0%	100.0%
Nevada (Southern)	Count	4	3	1	8

			Yes	No	Part-time	
		% within Region	50.0%	37.5%	12.5%	100.0%
	New England	Count	3	6	2	11
		% within Region	27.3%	54.5%	18.2%	100.0%
	New Jersey	Count	12	5	3	20
		% within Region	60.0%	25.0%	15.0%	100.0%
	New York (Albany)	Count	4	0	3	7
		% within Region	57.1%	.0%	42.9%	100.0%
	New York (City)	Count	1	6	0	7
		% within Region	14.3%	85.7%	.0%	100.0%
	New York (Western)	Count	6	1	2	9
		% within Region	66.7%	11.1%	22.2%	100.0%
	North Carolina	Count	6	2	0	8
		% within Region	75.0%	25.0%	.0%	100.0%
	Ohio	Count	9	1	2	12
		% within Region	75.0%	8.3%	16.7%	100.0%
	Oklahoma	Count	2	2	2	6
		% within Region	33.3%	33.3%	33.3%	100.0%
	Pennsylvania (Central)	Count	9	0	2	11
		% within Region	81.8%	.0%	18.2%	100.0%
	Pennsylvania (Philadelphia)	Count	18	0	3	21
		% within Region	85.7%	.0%	14.3%	100.0%
	Pennsylvania (Pittsburgh)	Count	7	2	1	10
		% within Region	70.0%	20.0%	10.0%	100.0%
	South Carolina	Count	5	0	1	6
		% within Region	83.3%	.0%	16.7%	100.0%
	Texas (Central)	Count	3	0	1	4
		% within Region	75.0%	.0%	25.0%	100.0%
	Texas (Houston)	Count	3	2	1	6
		% within Region	50.0%	33.3%	16.7%	100.0%
	Texas (North)	Count	7	3	0	10
		% within Region	70.0%	30.0%	.0%	100.0%
	Virginia	Count	4	2	1	7
		% within Region	57.1%	28.6%	14.3%	100.0%
	Washington	Count	4	2	1	7
		% within Region	57.1%	28.6%	14.3%	100.0%
	Wisconsin	Count	6	0	0	6
		% within Region	100.0%	.0%	.0%	100.0%

Table G-14:
Whether Schools had Mentors, by Region

			Yes	No	
Region	Alabama	Count	0	3	3
		% within Region	.0%	100.0%	100.0%
	Arizona	Count	7	7	14
		% within Region	50.0%	50.0%	100.0%
	California	Count	1	2	3
		% within Region	33.3%	66.7%	100.0%
	Colorado	Count	0	1	1
		% within Region	.0%	100.0%	100.0%
	Florida (South)	Count	4	7	11
		% within Region	36.4%	63.6%	100.0%
	Florida (Tampa Bay)	Count	5	2	7
		% within Region	71.4%	28.6%	100.0%
	Georgia	Count	5	19	24
		% within Region	20.8%	79.2%	100.0%
	Great Plains	Count	7	19	26
		% within Region	26.9%	73.1%	100.0%
	Idaho	Count	3	7	10
		% within Region	30.0%	70.0%	100.0%
	Illinois (Chicago)	Count	4	1	5
		% within Region	80.0%	20.0%	100.0%
	Indiana	Count	1	5	6
		% within Region	16.7%	83.3%	100.0%
	Iowa	Count	5	4	9
		% within Region	55.6%	44.4%	100.0%
	Kentucky	Count	0	2	2
		% within Region	.0%	100.0%	100.0%
	Michigan	Count	4	6	10
		% within Region	40.0%	60.0%	100.0%
	Mid-Atlantic	Count	1	5	6
		% within Region	16.7%	83.3%	100.0%
	Minnesota	Count	3	8	11
		% within Region	27.3%	72.7%	100.0%
	Nebraska	Count	1	4	5
		% within Region	20.0%	80.0%	100.0%
	Nevada (Southern)	Count	5	3	8

			Yes	No	
		% within Region	62.5%	37.5%	100.0%
	New England	Count	2	9	11
		% within Region	18.2%	81.8%	100.0%
	New Jersey	Count	6	14	20
		% within Region	30.0%	70.0%	100.0%
	New York (Albany)	Count	2	5	7
		% within Region	28.6%	71.4%	100.0%
	New York (City)	Count	4	3	7
		% within Region	57.1%	42.9%	100.0%
	New York (Western)	Count	3	6	9
		% within Region	33.3%	66.7%	100.0%
	North Carolina	Count	3	4	7
		% within Region	42.9%	57.1%	100.0%
	Ohio	Count	4	8	12
		% within Region	33.3%	66.7%	100.0%
	Oklahoma	Count	1	4	5
		% within Region	20.0%	80.0%	100.0%
	Pennsylvania (Central)	Count	1	9	10
		% within Region	10.0%	90.0%	100.0%
	Pennsylvania (Philadelphia)	Count	9	9	18
		% within Region	50.0%	50.0%	100.0%
	Pennsylvania (Pittsburgh)	Count	4	6	10
		% within Region	40.0%	60.0%	100.0%
	South Carolina	Count	4	2	6
		% within Region	66.7%	33.3%	100.0%
	Texas (Central)	Count	3	1	4
		% within Region	75.0%	25.0%	100.0%
	Texas (Houston)	Count	1	5	6
		% within Region	16.7%	83.3%	100.0%
	Texas (North)	Count	3	6	9
		% within Region	33.3%	66.7%	100.0%
	Virginia	Count	3	4	7
		% within Region	42.9%	57.1%	100.0%
	Washington	Count	3	3	6
		% within Region	50.0%	50.0%	100.0%
	Wisconsin	Count	4	2	6
		% within Region	66.7%	33.3%	100.0%

Table G-15:
Helpfulness of Changes to Future City Resources, by Region

Region		The new FutureCity.org website	The new handbook	The new Learning Blocks	The new online program calendar
Alabama	Mean	2.6667	2.6667		2.5000
	N	3	3		4
	Std. Deviation	1.15470	.57735		.57735
Arizona	Mean	3.2143	3.3571	3.0000	2.6667
	N	14	14	7	9
	Std. Deviation	.69929	.49725	.81650	1.22474
California	Mean	3.6667	3.5000	4.0000	1.8000
	N	3	2	1	5
	Std. Deviation	.57735	.70711	.	1.64317
Colorado	Mean	3.0000	3.0000		3.0000
	N	1	1		1
	Std. Deviation	.	.		.
Florida (South)	Mean	3.5455	3.4545	3.0000	2.6667
	N	11	11	3	9
	Std. Deviation	.52223	.52223	.00000	.86603
Florida (Tampa Bay)	Mean	3.1429	3.4286	3.0000	2.0000
	N	7	7	5	2
	Std. Deviation	.69007	.53452	.70711	.00000
Georgia	Mean	3.2000	3.6000	3.0000	2.7059
	N	25	25	5	17
	Std. Deviation	.76376	.57735	.70711	1.04670
Great Plains	Mean	3.1538	3.1538	3.2857	1.8947
	N	26	26	7	19
	Std. Deviation	.78446	.92487	.48795	1.24252
Idaho	Mean	3.2000	3.0000	3.3333	2.4444
	N	10	10	3	9
	Std. Deviation	.63246	.81650	.57735	1.33333
Illinois (Chicago)	Mean	4.0000	4.0000	3.7500	2.0000
	N	5	5	4	5
	Std. Deviation	.00000	.00000	.50000	1.00000
Indiana	Mean	3.6667	3.5000	3.0000	3.0000
	N	6	6	1	5
	Std. Deviation	.51640	.83666	.	1.00000

Region		The new FutureCity.org website	The new handbook	The new Learning Blocks	The new online program calendar
Iowa	Mean	3.3333	3.6667	3.0000	3.0000
	N	9	9	5	6
	Std. Deviation	1.00000	.50000	1.00000	1.26491
Kentucky	Mean	3.5000	2.5000		2.0000
	N	2	2		2
	Std. Deviation	.70711	.70711		2.82843
Michigan	Mean	2.9000	3.2000	3.7500	2.1250
	N	10	10	4	8
	Std. Deviation	.87560	.91894	.50000	1.24642
Mid-Atlantic	Mean	3.3333	3.0000	4.0000	2.6000
	N	6	5	1	5
	Std. Deviation	1.21106	1.22474	.	.54772
Minnesota	Mean	3.6364	3.6364	3.0000	2.7500
	N	11	11	3	8
	Std. Deviation	.50452	.50452	1.00000	1.03510
Nebraska	Mean	3.0000	2.8000	4.0000	3.3333
	N	4	5	1	3
	Std. Deviation	.81650	.83666	.	.57735
Nevada (Southern)	Mean	3.0000	3.1250	3.2000	3.5000
	N	8	8	5	8
	Std. Deviation	1.06904	1.12599	.44721	.75593
New England	Mean	3.3636	3.1818	3.0000	2.4000
	N	11	11	2	10
	Std. Deviation	.80904	.87386	1.41421	1.50555
New Jersey	Mean	3.7895	3.6111	3.8333	2.2308
	N	19	18	6	13
	Std. Deviation	.41885	.60768	.40825	1.36344
New York (Albany)	Mean	2.8571	3.1429	2.5000	2.6667
	N	7	7	2	6
	Std. Deviation	.89974	.69007	.70711	.51640
New York (City)	Mean	3.2857	3.5714	3.2500	2.4286
	N	7	7	4	7
	Std. Deviation	1.25357	.78680	.95743	1.13389
New York (Western)	Mean	2.6667	3.2222	3.6667	2.5000
	N	9	9	3	6
	Std. Deviation	1.00000	.83333	.57735	1.04881

Region		The new FutureCity.org website	The new handbook	The new Learning Blocks	The new online program calendar
North Carolina	Mean	3.2857	3.0000	2.6667	1.7500
	N	7	5	3	4
	Std. Deviation	.95119	1.22474	1.52753	2.06155
Ohio	Mean	2.9091	2.6667	3.0000	2.5455
	N	11	9	2	11
	Std. Deviation	1.13618	1.22474	.00000	.93420
Oklahoma	Mean	2.6000	3.4000	3.0000	2.0000
	N	5	5	1	6
	Std. Deviation	.89443	.54772	.	1.78885
Pennsylvania (Central)	Mean	3.0000	3.2727	3.0000	2.4444
	N	11	11	1	9
	Std. Deviation	.63246	.64667	.	1.33333
Pennsylvania (Philadelphia)	Mean	3.2632	3.5000	3.5455	2.5000
	N	19	20	11	14
	Std. Deviation	.73349	.82717	.52223	1.34450
Pennsylvania (Pittsburgh)	Mean	3.2000	3.3000	3.2500	3.3333
	N	10	10	4	6
	Std. Deviation	.91894	.67495	.95743	.51640
South Carolina	Mean	3.6667	3.8333	3.2500	2.3333
	N	6	6	4	3
	Std. Deviation	.51640	.40825	.50000	2.08167
Texas (Central)	Mean	3.5000	3.2500	3.3333	3.6667
	N	4	4	3	3
	Std. Deviation	1.00000	.95743	1.15470	.57735
Texas (Houston)	Mean	3.6000	3.8000	4.0000	2.6000
	N	5	5	1	5
	Std. Deviation	.54772	.44721	.	.54772
Texas (North)	Mean	3.3333	3.6667	3.6667	2.7000
	N	9	9	3	10
	Std. Deviation	.86603	.50000	.57735	1.56702
Virginia	Mean	2.8571	3.1667	2.3333	2.6667
	N	7	6	3	6
	Std. Deviation	.89974	.75277	1.15470	1.03280
Washington	Mean	2.8333	3.1667	2.3333	2.3333
	N	6	6	3	6
	Std. Deviation	1.47196	1.16905	.57735	1.36626

Region		The new FutureCity.org website	The new handbook	The new Learning Blocks	The new online program calendar
Wisconsin	Mean	3.6667	3.6000	2.7500	1.8333
	N	6	5	4	6
	Std. Deviation	.51640	.54772	.50000	2.04124

Table G-16:
Extent to Which Future City Met Expectations, by Region

		Exceeded my expectations	Fully met my expectations	Partially met my expectations	Did not meet my expectations
Alabama	Count	1	0	2	0
	% within Region	33.3%	.0%	66.7%	.0%
Arizona	Count	7	3	3	0
	% within Region	53.8%	23.1%	23.1%	.0%
California	Count	1	1	1	0
	% within Region	33.3%	33.3%	33.3%	.0%
Colorado	Count	0	0	1	0
	% within Region	.0%	.0%	100.0%	.0%
Florida (South)	Count	3	3	3	2
	% within Region	27.3%	27.3%	27.3%	18.2%
Florida (Tampa Bay)	Count	1	4	2	0
	% within Region	14.3%	57.1%	28.6%	.0%
Georgia	Count	6	14	4	1
	% within Region	24.0%	56.0%	16.0%	4.0%
Great Plains	Count	3	21	0	2
	% within Region	11.5%	80.8%	.0%	7.7%
Idaho	Count	1	6	3	0
	% within Region	10.0%	60.0%	30.0%	.0%
Illinois (Chicago)	Count	2	3	0	0
	% within Region	40.0%	60.0%	.0%	.0%
Indiana	Count	2	4	0	0
	% within Region	33.3%	66.7%	.0%	.0%
Iowa	Count	2	6	1	0
	% within Region	22.2%	66.7%	11.1%	.0%
Kentucky	Count	0	1	1	0
	% within Region	.0%	50.0%	50.0%	.0%
Michigan	Count	1	7	2	0
	% within Region	10.0%	70.0%	20.0%	.0%
Mid-Atlantic	Count	1	3	2	0
	% within Region	16.7%	50.0%	33.3%	.0%
Minnesota	Count	2	8	1	0
	% within Region	18.2%	72.7%	9.1%	.0%
Nebraska	Count	0	4	0	1

		% within Region	.0%	80.0%	.0%	20.0%
	Nevada (Southern)	Count	3	3	1	1
		% within Region	37.5%	37.5%	12.5%	12.5%
	New England	Count	0	6	3	2
		% within Region	.0%	54.5%	27.3%	18.2%
	New Jersey	Count	7	12	0	1
		% within Region	35.0%	60.0%	.0%	5.0%
	New York (Albany)	Count	2	2	2	1
		% within Region	28.6%	28.6%	28.6%	14.3%
	New York (City)	Count	2	4	0	1
		% within Region	28.6%	57.1%	.0%	14.3%
	New York (Western)	Count	1	6	2	0
		% within Region	11.1%	66.7%	22.2%	.0%
	North Carolina	Count	1	5	1	0
		% within Region	14.3%	71.4%	14.3%	.0%
	Ohio	Count	2	8	2	0
		% within Region	16.7%	66.7%	16.7%	.0%
	Oklahoma	Count	1	4	0	0
		% within Region	20.0%	80.0%	.0%	.0%
	Pennsylvania (Central)	Count	2	8	0	1
		% within Region	18.2%	72.7%	.0%	9.1%
	Pennsylvania	Count	7	11	2	0
	(Philadelphia)	% within Region	35.0%	55.0%	10.0%	.0%
	Pennsylvania (Pittsburgh)	Count	6	4	0	0
		% within Region	60.0%	40.0%	.0%	.0%
	South Carolina	Count	0	6	0	0
		% within Region	.0%	100.0%	.0%	.0%
	Texas (Central)	Count	2	1	1	0
		% within Region	50.0%	25.0%	25.0%	.0%
	Texas (Houston)	Count	3	0	1	0
		% within Region	75.0%	.0%	25.0%	.0%
	Texas (North)	Count	3	6	0	0
		% within Region	33.3%	66.7%	.0%	.0%
	Virginia	Count	2	3	1	1
		% within Region	28.6%	42.9%	14.3%	14.3%
	Washington	Count	3	1	1	1
		% within Region	50.0%	16.7%	16.7%	16.7%
	Wisconsin	Count	2	4	0	0
		% within Region	33.3%	66.7%	.0%	.0%

Appendix H: Mentor Survey

Future City Mentor Survey

Please take a few moments to tell us about your experience with Future City. This information will be used to make the program better, so we appreciate your honesty.

1. Name

2. School where you mentored

*3. State where the school is located

State:

4. What type of engineer are you?

5. What organization do you work for?

6. Are you affiliated with any engineering societies? If yes, which one(s):

7. How many years have you been working with kids as a volunteer, coach or teacher?

8. Counting this year, how many times have you participated in Future City *as a mentor*?

- ◯ One (this year is my first year)
- ◯ Two years
- ◯ Three years
- ◯ Four years
- ◯ Five years
- ◯ Other (please specify)

9. Have you also been a judge or other volunteer for Future City?

- ◯ Yes
- ◯ No

10. Why did you decide to participate in Future City as a mentor this year?

Future City Mentor Survey

11. Please estimate the number of hours *you* worked on Future City this year:

12. Thinking about all the kids in your group as a whole (not just the kids who went to the competition), to what extent did Future City help improve the students'...

	Greatly Improved	Improved	Improved a Little	Not Improved	Don't Know
...problem solving skills.	◯	◯	◯	◯	◯
...ability to work in teams.	◯	◯	◯	◯	◯
...comfort working in a self-directed manner.	◯	◯	◯	◯	◯
...research and writing skills.	◯	◯	◯	◯	◯
...project management skills.	◯	◯	◯	◯	◯
...oral presentation skills.	◯	◯	◯	◯	◯
...understanding of engineering.	◯	◯	◯	◯	◯

If little or no improvement for any of the above, please explain:

13. We'd like to know how valuable each of the following Future City components was for your students.

	High Value	Some Value	Little Value	No Value	Don't Know or N/A
Designing a city in SimCity	◯	◯	◯	◯	◯
The essay	◯	◯	◯	◯	◯
Building a model	◯	◯	◯	◯	◯
Working in a team	◯	◯	◯	◯	◯
Working with a mentor (you)	◯	◯	◯	◯	◯
Preparing a presentation	◯	◯	◯	◯	◯
Delivering a presentation	◯	◯	◯	◯	◯
The competition	◯	◯	◯	◯	◯

If little or no value, please explain:

Future City Mentor Survey

14. To what extent did Future City meet your expectations this year?

- ◯ Exceeded my expectations
- ◯ Fully met my expectations
- ◯ Partially met my expectations
- ◯ Did not meet my expectations

15. In what ways, if any, did Future City support your personal or professional goals? Please be specific.

16. To what extent do you agree that Future City represents the field of engineering?

- ◯ Strongly agree
- ◯ Agree
- ◯ Neutral
- ◯ Disagree
- ◯ Strongly disagree

17. This year, we made changes to some resources. Please tell us whether these improvements were helpful.

	Very Helpful	Helpful	A Little Helpful	Not Helpful	I Didn't Use This
The new FutureCity.org website	◯	◯	◯	◯	◯
The new handbook	◯	◯	◯	◯	◯
The new Learning Blocks	◯	◯	◯	◯	◯
The new online program calendar	◯	◯	◯	◯	◯

18. Are there other resources that would be useful? Please describe.

19. Would you recommend Future City to a colleague?

- ◯ Yes
- ◯ Maybe
- ◯ No

Future City Mentor Survey

20. How can we encourage more engineers to volunteer as mentors?

21. How can we improve the Future City program?

22. Concord Evaluation Group will be providing an evaluation report to Future City in late spring 2012. If you are interested in receiving a copy of the executive summary of the report by email, please check below:

- ◯ No, thanks
- ◯ Yes, please send me the report executive summary when it is ready

Email address for report:

Appendix I: Additional Mentor Data Tables

National Data

Table I-1:

Professional Positions Held by Mentors (Engineering Fields, Unless Otherwise Specified)

	Frequency	Percent
Civil	77	29.4
Mechanical	34	13.0
Electrical	31	11.8
Industrial	18	6.9
Environmental	13	5.0
Chemical	11	4.2
Architectural	10	3.8
Computer/Software	9	3.4
Transportation	8	3.1
Structural	7	2.7
Manufacturing	5	1.9
Non-engineer (Architect)	5	1.9
Aeronautical/Aerospace	3	1.1
Metallurgy and Materials	3	1.1
Nuclear	3	1.1
Agricultural	1	.4
Mineral and Mining	1	.4
Non-engineer (Teacher)	8	3.1
Non-engineer (Biologist)	2	.8
Non-engineer (Chemist)	2	.8
Non-engineer (Land surveyor)	1	.4
Non-engineer (Parent)	1	.4
Non-engineer (Unspecified)	3	1.1
Non-engineer (Urban planner)	1	.4
Missing	5	1.9
Total	262	100.0

Table I-2:

Mentor Affiliations with Professional Societies (N = 262)

Society	Frequency	Percent
ASCE	55	21.0%
Local engineering societies	33	12.6%
ITE	13	5.0%
ASHE	8	3.1%
ASME	8	3.1%
IEEE	8	3.1%
NSPE	8	3.1%
ASHRAE	7	2.7%
IIE	7	2.7%
ACEC	6	2.3%
ABCD	5	1.9%
SAME	6	2.3%
ACI	5	1.9%
AWWA	5	1.9%
SME	5	1.9%
SWE	5	1.9%
AIAA	4	1.5%
AIChE	3	1.1%
ACS	2	<1%
AISC	2	<1%
APWA	2	<1%
CAACE	2	<1%
CHMM	2	<1%
FES	2	<1%
ISPE	2	<1%
SAE	2	<1%
AAEE	1	<1%
AEA	1	<1%
AGC	1	<1%
AIA	1	<1%
AICH	1	<1%
AREMA	1	<1%
ASAI	1	<1%
ASEE	1	<1%
ASM	1	<1%
ASPE	1	<1%
ASPLE	1	<1%
ASTM	1	<1%
Design-Build Institute	1	<1%
Engineers without Borders	1	<1%
ESD	1	<1%

Society	Frequency	Percent
GSPE	1	<1%
MDITS	1	<1%
NCARB	1	<1%
NSBE	1	<1%
Order of the Engineer	1	<1%
PLSO	1	<1%
SCE	1	<1%
SEI	1	<1%
SPE	1	<1%
SSE	1	<1%
TRB	1	<1%
USGBC	1	<1%
WJPE	1	<1%
WTS	1	<1%

Table I-3:

Perceived Impact on Students, from Mentor Perspective

		Greatly Improved	Improved	Improved a Little	Not Improved	Don't Know	Total
Problem solving skills	Number	*78*	*148*	28	6	0	263
	Percent	*29.7*	*56.3*	10.6	2.3	0.0	100.0
Ability to work in teams	Number	*119*	*116*	20	5	0	263
	Percent	*45.2*	*44.1*	7.6	1.9	0.0	100.0
Comfort working in a self-directed manner	Number	*61*	*139*	42	6	9	263
	Percent	*23.2*	*52.9*	16.0	2.3	3.4	100.0
Research and writing skills	Number	*72*	*141*	37	1	9	263
	Percent	*27.4*	*53.6*	14.1	.4	3.4	100.0
Project management	Number	*80*	*122*	43	8	7	263
	Percent	*30.4*	*46.4*	16.3	3.0	2.7	100.0
Oral presentation	Number	*124*	*101*	27	1	7	263
	Percent	*47.1*	*38.4*	10.3	.4	2.7	100.0
Understanding of engineering	Number	*118*	*122*	18	0	2	263
	Percent	*44.9*	*46.4*	6.8	0.0	.8	100.0

Table I-4:

Perceived Value of Future City Components, from Mentor Perspective

		High Value	Some Value	Little Value	No Value	Don't Know	Total
Designing a city in SIM City	Frequency	*110*	*103*	29	5	15	262
	Percent	*42.0*	*39.3*	11.1	1.9	5.7	100.0
The essay	Frequency	*162*	*78*	5	0	17	262
	Percent	*61.8*	*29.8*	1.9	0	6.5	100.0
Building a model	Frequency	*191*	*62*	3	0	6	262
	Percent	*72.9*	*23.7*	1.1	0	2.3	100.0
Working in a team	Frequency	*219*	*38*	0	0	5	262
	Percent	*83.6*	*14.5*	0	0	1.9	100.0
Working with a mentor	Frequency	*142*	*109*	0	0	11	262
	Percent	*54.2*	*41.6*	0	0	4.2	100.0
Preparing a presentation	Frequency	*189*	*60*	6	0	7	262
	Percent	*72.1*	*22.9*	2.3	0	2.7	100.0
Delivering a presentation	Frequency	*215*	*33*	5	1	8	262
	Percent	*82.1*	*12.6*	1.9	.4	3.1	100.0
The competition	Frequency	*201*	*48*	2	2	9	262
	Percent	*76.7*	*18.3*	.8	.8	3.4	100.0

Table I-5:

Proportion of Mentors Reporting that Future City Met Their Expectations this Year

	Frequency	Percent
Exceeded my expectations	94	35.9
Fully met my expectations	137	52.3
Partially met my expectations	19	7.3
Did not meet my expectations	7	2.7
Missing	5	1.9
Total	262	100.0

Table I-6:

Perceived Value of New or Revised Future City Resources, from Mentor Perspective

		Very Helpful	Helpful	A Little Helpful	Not Helpful	Didn't Use	Total
The new FutureCity.org	Frequency	*87*	*110*	27	5	21	262
	Percent	*33.2*	*42.0*	10.3	1.9	8.0	100.0
The new handbook	Frequency	*77*	*113*	23	4	28	262
	Percent	*29.4*	*43.1*	8.8	1.5	10.7	100.0
The new Learning Blocks	Frequency	*47*	*83*	24	7	84	262
	Percent	*17.9*	*31.7*	9.2	2.7	32.1	100.0
The new online calendar program	Frequency	*49*	*85*	32	4	75	262
	Percent	*18.7*	*32.4*	12.2	1.5	28.6	100.0

Table I-7:

Proportion of Mentors Who Would Recommend Future City to a Colleague

	Frequency	Percent
Yes	241	92.0
Maybe	13	5.0
No	2	.8
Missing	6	2.3
Total	262	100.0

Regional Data

Table I-8:

Years of Experience Working with Kids, by Region

	Mean	N	Std. Deviation
Alabama	4.40	5	4.561
Arizona	2.00	7	1.414
California (Northern)	2.00	1	.
Colorado	3.00	1	.
Florida (South)	5.50	8	8.767
Florida (Tampa)	2.50	4	1.915
Georgia	4.71	21	5.515
Great Plains	10.20	10	9.004
Idaho	3.67	12	3.701
Illinois (Chicago)	3.50	2	3.536
Indiana	4.50	4	3.786
Iowa	7.50	2	.707
Louisiana	15.00	2	21.213
Michigan	9.50	2	6.364
Mid-Atlantic	10.17	6	11.514
Minnesota	7.71	17	7.465
Nebraska	5.00	1	.
Nevada (Southern)	8.00	3	6.245
New England	6.80	5	6.261
New Jersey	3.93	15	2.815
New York (Albany)	5.90	10	4.408
New York (Western)	6.20	5	3.834
North Carolina	6.20	5	3.564
Ohio	7.10	10	5.486
Oklahoma	3.25	4	1.893
Pennsylvania (Central)	5.20	5	1.095
Pennsylvania (Philadelphia)	7.31	16	7.786
Pennsylvania (Pittsburgh)	4.50	8	2.976
South Carolina	11.27	11	6.987
Texas (Central)	4.78	9	4.177
Texas (Houston)	7.46	13	6.790
Texas (North)	3.00	3	2.000
Virginia	11.50	4	12.234

	Mean	N	Std. Deviation
Washington	10.13	8	9.125
Wisconsin	4.76	17	3.364
Total	6.28	256	6.317

Table I-9: Average Number of Times as Future City Mentor, by Region

	Mean	N	Std. Deviation
Alabama	1.00	5	.000
Arizona	1.29	7	.756
California (Northern)	2.00	1	.
Colorado	3.00	1	.
Florida (South)	2.25	8	2.121
Florida (Tampa)	2.25	4	1.500
Georgia	1.48	21	1.078
Great Plains	2.30	10	2.003
Idaho	2.50	12	1.883
Illinois (Chicago)	3.50	2	3.536
Indiana	4.50	4	3.786
Iowa	7.00	2	1.414
Louisiana	1.00	2	.000
Michigan	8.50	2	7.778
Mid-Atlantic	2.00	6	.894
Minnesota	3.12	17	2.342
Nebraska	2.00	1	.
Nevada (Southern)	6.33	3	3.512
New England	6.20	5	6.686
New Jersey	2.47	15	1.846
New York (Albany)	3.00	10	1.764
New York (Western)	3.80	5	3.421
North Carolina	3.00	5	1.581
Ohio	4.00	10	4.738
Oklahoma	2.00	4	.000
Pennsylvania (Central)	1.80	5	1.095
Pennsylvania (Philadelphia)	4.19	16	5.205
Pennsylvania (Pittsburgh)	2.75	8	1.832
South Carolina	1.67	12	1.557
Texas (Central)	1.00	10	.471
Texas (Houston)	1.85	13	2.267
Texas (North)	1.67	3	1.155
Virginia	1.25	4	.500
Washington	1.56	9	1.130
Wisconsin	1.94	18	1.259
Total	2.56	260	2.706

Table I-10: Average Number of Hours Devoted to Future City, by Region

	Mean	N	Std. Deviation
Alabama	28.00	5	21.679
Arizona	52.86	7	51.547
California (Northern)	40.00	1	.
Colorado	50.00	1	.
Florida (South)	63.75	8	45.336
Florida (Tampa)	35.00	4	13.540
Georgia	37.40	20	30.031
Great Plains	32.90	10	18.254
Idaho	42.50	12	25.981
Illinois (Chicago)	35.00	2	35.355
Indiana	37.33	3	20.526
Iowa	75.00	2	49.497
Louisiana	60.00	2	56.569
Michigan	27.50	2	17.678
Mid-Atlantic	54.17	6	72.068
Minnesota	35.06	17	16.490
Nebraska	30.00	1	.
Nevada (Southern)	52.67	3	31.644
New England	45.20	5	21.100
New Jersey	44.53	15	43.896
New York (Albany)	34.30	10	14.893
New York (Western)	35.00	5	10.000
North Carolina	29.25	4	21.960
Ohio	50.56	9	77.642
Oklahoma	18.75	4	4.856
Pennsylvania (Central)	18.00	5	13.509
Pennsylvania (Philadelphia)	32.67	15	24.593
Pennsylvania (Pittsburgh)	40.00	7	20.000
South Carolina	35.92	12	28.987
Texas (Central)	69.00	10	45.814
Texas (Houston)	31.38	13	37.938
Texas (North)	36.67	3	25.166
Virginia	30.50	4	31.000
Washington	24.56	9	13.436
Wisconsin	53.22	18	40.915
Total	40.60	254	34.911

Table I-11:

Whether Mentor has Been Future City Judge, by Region

		Judge for Future City?		
		Yes	No	Total
Alabama	Count	2	3	5
	% within region	40.0%	60.0%	100.0%
Arizona	Count	3	4	7
	% within region	42.9%	57.1%	100.0%
California (Northern)	Count	1	0	1
	% within region	100.0%	.0%	100.0%
Colorado	Count	0	1	1
	% within region	.0%	100.0%	100.0%
Florida (South)	Count	2	6	8
	% within region	25.0%	75.0%	100.0%
Florida (Tampa)	Count	1	3	4
	% within region	25.0%	75.0%	100.0%
Georgia	Count	1	20	21
	% within region	4.8%	95.2%	100.0%
Great Plains	Count	3	7	10
	% within region	30.0%	70.0%	100.0%
Idaho	Count	3	9	12
	% within region	25.0%	75.0%	100.0%
Illinois (Chicago)	Count	1	1	2
	% within region	50.0%	50.0%	100.0%
Indiana	Count	1	3	4
	% within region	25.0%	75.0%	100.0%
Iowa	Count	0	2	2
	% within region	.0%	100.0%	100.0%
Louisiana	Count	0	2	2
	% within region	.0%	100.0%	100.0%
Michigan	Count	1	1	2
	% within region	50.0%	50.0%	100.0%
Mid-Atlantic	Count	1	5	6
	% within region	16.7%	83.3%	100.0%
Minnesota	Count	7	10	17
	% within region	41.2%	58.8%	100.0%
Nebraska	Count	1	0	1

		Judge for Future City?		Total
	% within region	100.0%	.0%	100.0%
Nevada (Southern)	Count	0	3	3
	% within region	.0%	100.0%	100.0%
New England	Count	1	5	6
	% within region	16.7%	83.3%	100.0%
New Jersey	Count	1	14	15
	% within region	6.7%	93.3%	100.0%
New York (Albany)	Count	4	6	10
	% within region	40.0%	60.0%	100.0%
New York (Western)	Count	1	4	5
	% within region	20.0%	80.0%	100.0%
North Carolina	Count	1	4	5
	% within region	20.0%	80.0%	100.0%
Ohio	Count	0	10	10
	% within region	.0%	100.0%	100.0%
Oklahoma	Count	2	3	5
	% within region	40.0%	60.0%	100.0%
Pennsylvania (Central)	Count	3	2	5
	% within region	60.0%	40.0%	100.0%
Pennsylvania (Philadelphia)	Count	6	10	16
	% within region	37.5%	62.5%	100.0%
Pennsylvania (Pittsburgh)	Count	1	7	8
	% within region	12.5%	87.5%	100.0%
South Carolina	Count	2	10	12
	% within region	16.7%	83.3%	100.0%
Texas (Central)	Count	0	10	10
	% within region	.0%	100.0%	100.0%
Texas (Houston)	Count	4	9	13
	% within region	30.8%	69.2%	100.0%
Texas (North)	Count	0	3	3
	% within region	.0%	100.0%	100.0%
Virginia	Count	0	4	4
	% within region	.0%	100.0%	100.0%
Washington	Count	0	9	9
	% within region	.0%	100.0%	100.0%
Wisconsin	Count	5	13	18
	% within region	27.8%	72.2%	100.0%

Table I-12: Perceived Impact on Students' Problem-solving Skills, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.00	5	.707
Arizona	3.00	7	.577
California (Northern)	3.00	1	.
Colorado	4.00	1	.
Florida (South)	3.25	8	.707
Florida (Tampa)	3.25	4	.500
Georgia	3.10	20	.447
Great Plains	3.50	10	.527
Idaho	3.25	12	.622
Illinois (Chicago)	3.50	2	.707
Indiana	3.00	4	.000
Iowa	3.00	2	1.414
Louisiana	3.50	2	.707
Michigan	2.50	2	.707
Mid-Atlantic	2.67	6	.516
Minnesota	3.35	17	.786
Nebraska	3.00	1	.
Nevada (Southern)	3.67	3	.577
New England	2.50	6	.548
New Jersey	3.36	14	.497
New York (Albany)	2.89	9	.601
New York (Western)	2.60	5	.548
North Carolina	3.20	5	.447
Ohio	3.20	10	.632
Oklahoma	3.00	4	.000
Pennsylvania (Central)	3.20	5	.447
Pennsylvania (Philadelphia)	3.19	16	.544
Pennsylvania (Pittsburgh)	3.13	8	.835
South Carolina	3.33	12	.651
Texas (Central)	3.20	10	.632
Texas (Houston)	3.69	13	.480
Texas (North)	3.00	2	.000
Virginia	3.50	4	.577
Washington	3.56	9	.527
Wisconsin	3.00	15	.655
Total	3.20	254	.616

Table I-13: Perceived Impact on Students' Ability to Work in Teams, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.40	5	.894
Arizona	3.29	7	.488
California (Northern)	3.00	1	.
Colorado	4.00	1	.
Florida (South)	3.63	8	.744
Florida (Tampa)	3.25	4	.500
Georgia	3.21	19	.631
Great Plains	3.10	10	.568
Idaho	3.50	12	.522
Illinois (Chicago)	4.00	2	.000
Indiana	3.25	4	.500
Iowa	3.50	2	.707
Louisiana	4.00	2	.000
Michigan	3.00	2	.000
Mid-Atlantic	3.33	6	.516
Minnesota	3.47	17	.624
Nebraska	4.00	1	.
Nevada (Southern)	4.00	3	.000
New England	2.83	6	.408
New Jersey	3.60	15	.507
New York (Albany)	3.30	10	.675
New York (Western)	2.20	5	.447
North Carolina	3.20	5	.447
Ohio	3.30	10	.675
Oklahoma	3.75	4	.500
Pennsylvania (Central)	3.40	5	.548
Pennsylvania (Philadelphia)	3.38	16	.719
Pennsylvania (Pittsburgh)	3.50	8	.535
South Carolina	3.50	12	.522
Texas (Central)	3.40	10	.699
Texas (Houston)	3.62	13	.650
Texas (North)	3.00	2	.000
Virginia	3.75	4	.500
Washington	3.56	9	.726
Wisconsin	3.33	15	.724

Table I-14: Perceived Impact on Students' Comfort Working in Self-directed Manner, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	2.60	5	.548
Arizona	3.00	7	.816
California (Northern)	4.00	1	.
Colorado	4.00	1	.
Florida (South)	3.50	8	.535
Florida (Tampa)	2.75	4	.500
Georgia	3.06	17	.659
Great Plains	3.10	10	.738
Idaho	2.83	12	.835
Illinois (Chicago)	3.50	2	.707
Indiana	2.67	3	1.528
Iowa	3.50	2	.707
Louisiana	3.00	2	.000
Michigan	3.00	2	.000
Mid-Atlantic	2.67	6	.516
Minnesota	2.88	17	.697
Nebraska	4.00	1	.
Nevada (Southern)	3.67	3	.577
New England	2.40	5	1.140
New Jersey	3.50	14	.519
New York (Albany)	3.11	9	.601
New York (Western)	2.00	5	.707
North Carolina	3.00	5	.707
Ohio	2.90	10	.738
Oklahoma	3.25	4	.500
Pennsylvania (Central)	2.80	5	1.095
Pennsylvania (Philadelphia)	2.94	16	.443
Pennsylvania (Pittsburgh)	2.88	8	.641
South Carolina	3.00	12	.853
Texas (Central)	3.20	10	.632
Texas (Houston)	3.50	12	.522
Texas (North)	3.00	2	.000
Virginia	3.25	4	.957
Washington	3.11	9	.601
Wisconsin	2.80	15	.676
Total	3.03	248	.716

Table I-15: Perceived Impact on Students' Research and Writing Skills, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	2.67	3	.577
Arizona	2.86	7	.378
California (Northern)	3.00	1	.
Colorado	4.00	1	.
Florida (South)	3.25	8	.707
Florida (Tampa)	3.00	4	.816
Georgia	3.05	19	.705
Great Plains	3.60	10	.516
Idaho	2.75	12	.866
Illinois (Chicago)	3.50	2	.707
Indiana	3.50	4	.577
Iowa	3.50	2	.707
Louisiana	3.00	2	.000
Michigan	3.00	1	.
Mid-Atlantic	3.33	6	.516
Minnesota	2.82	17	.529
Nebraska	3.00	1	.
Nevada (Southern)	3.33	3	.577
New England	2.83	6	.753
New Jersey	3.47	15	.640
New York (Albany)	3.10	10	.876
New York (Western)	2.40	5	.894
North Carolina	3.20	5	.447
Ohio	3.10	10	.568
Oklahoma	3.50	4	.577
Pennsylvania (Central)	3.00	5	.707
Pennsylvania (Philadelphia)	3.20	15	.414
Pennsylvania (Pittsburgh)	3.13	8	.835
South Carolina	3.17	12	.577
Texas (Central)	3.30	10	.675
Texas (Houston)	3.23	13	.725
Texas (North)	3.00	2	.000
Virginia	3.50	4	1.000
Washington	3.00	8	.535
Wisconsin	3.13	16	.619
Total	3.13	251	.659

Table I-16: Perceived Impact on Students' Project Management Skills, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	2.60	5	.548
Arizona	3.00	7	.000
California (Northern)	3.00	1	.
Colorado	4.00	1	.
Florida (South)	3.38	8	.916
Florida (Tampa)	2.50	4	.577
Georgia	3.17	18	.618
Great Plains	3.20	10	.422
Idaho	2.75	12	.965
Illinois (Chicago)	3.50	2	.707
Indiana	3.00	4	1.414
Iowa	3.00	2	1.414
Louisiana	4.00	2	.000
Michigan	3.50	2	.707
Mid-Atlantic	2.83	6	.753
Minnesota	2.82	17	.883
Nebraska	4.00	1	.
Nevada (Southern)	3.33	3	1.155
New England	2.17	6	.753
New Jersey	3.53	15	.516
New York (Albany)	3.11	9	1.167
New York (Western)	2.20	5	.837
North Carolina	3.20	5	.447
Ohio	3.10	10	.568
Oklahoma	2.75	4	1.258
Pennsylvania (Central)	3.00	5	1.225
Pennsylvania (Philadelphia)	3.25	16	.683
Pennsylvania (Pittsburgh)	3.13	8	.835
South Carolina	3.00	12	.853
Texas (Central)	3.10	10	.568
Texas (Houston)	3.46	13	.776
Texas (North)	3.00	2	.000
Virginia	3.50	4	.577
Washington	3.11	9	.333
Wisconsin	3.07	15	.704
Total	3.08	253	.780

Table I-17: Perceived Impact on Students' Oral Presentation Skills, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.50	4	.577
Arizona	3.29	7	.488
California (Northern)	4.00	1	.
Colorado	4.00	1	.
Florida (South)	3.63	8	.518
Florida (Tampa)	3.25	4	.957
Georgia	3.50	20	.688
Great Plains	3.50	10	.527
Idaho	3.58	12	.669
Illinois (Chicago)	3.50	2	.707
Indiana	3.75	4	.500
Iowa	3.50	2	.707
Louisiana	3.50	2	.707
Michigan	3.50	2	.707
Mid-Atlantic	2.83	6	.753
Minnesota	3.35	17	.702
Nebraska	3.00	1	.
Nevada (Southern)	3.33	3	.577
New England	3.33	6	.516
New Jersey	3.80	15	.414
New York (Albany)	2.80	10	1.033
New York (Western)	2.40	5	.548
North Carolina	3.60	5	.548
Ohio	3.30	10	.949
Oklahoma	3.25	4	.500
Pennsylvania (Central)	3.20	5	.447
Pennsylvania (Philadelphia)	3.20	15	.775
Pennsylvania (Pittsburgh)	3.38	8	.518
South Carolina	3.33	12	.888
Texas (Central)	3.60	10	.516
Texas (Houston)	3.69	13	.480
Texas (North)	3.00	2	.000
Virginia	3.75	4	.500
Washington	3.00	8	.756
Wisconsin	3.20	15	.676
Total	3.38	253	.688

Table I-18: Perceived Impact on Students' Understanding of Engineering, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.60	5	.548
Arizona	3.86	7	.378
California (Northern)	3.00	1	.
Colorado	4.00	1	.
Florida (South)	3.63	8	.744
Florida (Tampa)	3.00	4	.816
Georgia	3.25	20	.550
Great Plains	3.40	10	.699
Idaho	3.58	12	.669
Illinois (Chicago)	3.50	2	.707
Indiana	3.50	4	.577
Iowa	4.00	2	.000
Louisiana	3.50	2	.707
Michigan	3.00	2	.000
Mid-Atlantic	3.33	6	.516
Minnesota	3.41	17	.618
Nebraska	4.00	1	.
Nevada (Southern)	3.67	3	.577
New England	3.33	6	.816
New Jersey	3.20	15	.561
New York (Albany)	3.60	10	.516
New York (Western)	3.00	5	1.000
North Carolina	3.80	5	.447
Ohio	3.10	10	.738
Oklahoma	3.50	4	.577
Pennsylvania (Central)	3.00	5	.000
Pennsylvania (Philadelphia)	3.50	16	.516
Pennsylvania (Pittsburgh)	3.25	8	.707
South Carolina	3.50	12	.674
Texas (Central)	3.50	10	.527
Texas (Houston)	3.54	13	.519
Texas (North)	3.00	3	1.000
Virginia	3.50	4	.577
Washington	3.00	9	.707
Wisconsin	3.19	16	.544
Total	3.39	258	.615

Table I-19: Perceived Value of SIM City, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.50	4	.577
Arizona	3.29	7	.756
California (Northern)	3.00	1	.
Colorado	3.00	1	.
Florida (South)	3.63	8	.744
Florida (Tampa)	3.25	4	.500
Georgia	3.05	21	.921
Great Plains	3.60	10	.699
Idaho	3.00	12	.953
Illinois (Chicago)	3.50	2	.707
Indiana	3.25	4	.957
Iowa	3.00	2	.000
Louisiana	4.00	2	.000
Michigan	2.50	2	.707
Mid-Atlantic	3.50	6	.837
Minnesota	3.44	16	.512
Nebraska	3.00	1	.
Nevada (Southern)	3.00	3	1.000
New England	3.20	5	.837
New Jersey	2.92	13	.760
New York (Albany)	3.22	9	.833
New York (Western)	3.20	5	1.095
North Carolina	3.50	4	.577
Ohio	3.40	10	.699
Oklahoma	3.00	4	.816
Pennsylvania (Central)	3.00	4	.816
Pennsylvania (Philadelphia)	3.56	16	.629
Pennsylvania (Pittsburgh)	3.25	8	.463
South Carolina	3.55	11	.522
Texas (Central)	3.60	10	.516
Texas (Houston)	3.77	13	.439
Texas (North)	3.33	3	.577
Virginia	3.50	4	1.000
Washington	2.38	8	.744
Wisconsin	3.07	14	.829
Total	3.29	247	.751

Table I-20: Perceived Value of the Essay, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.00	2	.000
Arizona	3.67	6	.516
California (Northern)	4.00	1	.
Colorado	4.00	1	.
Florida (South)	3.88	8	.354
Florida (Tampa)	3.25	4	.957
Georgia	3.45	20	.510
Great Plains	3.60	10	.516
Idaho	3.45	11	.522
Illinois (Chicago)	4.00	2	.000
Indiana	3.50	4	.577
Iowa	3.00	2	.000
Louisiana	3.00	2	.000
Michigan	4.00	2	.000
Mid-Atlantic	3.67	6	.816
Minnesota	3.65	17	.606
Nebraska	4.00	1	.
Nevada (Southern)	4.00	3	.000
New England	3.60	5	.548
New Jersey	3.86	14	.363
New York (Albany)	3.67	9	.707
New York (Western)	3.40	5	.548
North Carolina	3.60	5	.548
Ohio	3.30	10	.675
Oklahoma	3.75	4	.500
Pennsylvania (Central)	3.80	5	.447
Pennsylvania (Philadelphia)	3.64	14	.497
Pennsylvania (Pittsburgh)	3.75	8	.463
South Carolina	3.92	12	.289
Texas (Central)	3.60	10	.516
Texas (Houston)	4.00	13	.000
Texas (North)	3.33	3	.577
Virginia	4.00	4	.000
Washington	3.78	9	.441
Wisconsin	3.38	13	.506
Total	3.64	245	.522

Table I-21: Perceived Value of Building a Model, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	4.00	4	.000
Arizona	3.86	7	.378
California (Northern)	4.00	1	.
Colorado	4.00	1	.
Florida (South)	3.75	8	.463
Florida (Tampa)	3.50	4	.577
Georgia	3.85	20	.366
Great Plains	3.80	10	.422
Idaho	3.75	12	.452
Illinois (Chicago)	4.00	2	.000
Indiana	4.00	4	.000
Iowa	3.50	2	.707
Louisiana	4.00	2	.000
Michigan	3.50	2	.707
Mid-Atlantic	3.83	6	.408
Minnesota	3.82	17	.393
Nebraska	4.00	1	.
Nevada (Southern)	4.00	3	.000
New England	3.17	6	.753
New Jersey	3.86	14	.363
New York (Albany)	3.70	10	.483
New York (Western)	3.40	5	.548
North Carolina	3.40	5	.894
Ohio	3.80	10	.422
Oklahoma	3.75	4	.500
Pennsylvania (Central)	3.60	5	.548
Pennsylvania (Philadelphia)	3.63	16	.500
Pennsylvania (Pittsburgh)	3.75	8	.463
South Carolina	3.67	12	.492
Texas (Central)	3.70	10	.483
Texas (Houston)	4.00	13	.000
Texas (North)	3.33	3	.577
Virginia	4.00	4	.000
Washington	3.78	9	.441
Wisconsin	3.44	16	.629
Total	3.73	256	.468

Table I-22: Perceived Value of Working in a Team, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.80	5	.447
Arizona	4.00	7	.000
California (Northern)	3.00	1	.
Colorado	4.00	1	.
Florida (South)	3.88	8	.354
Florida (Tampa)	3.75	4	.500
Georgia	3.75	20	.444
Great Plains	3.60	10	.516
Idaho	3.92	12	.289
Illinois (Chicago)	4.00	2	.000
Indiana	3.75	4	.500
Iowa	4.00	2	.000
Louisiana	4.00	2	.000
Michigan	4.00	2	.000
Mid-Atlantic	3.67	6	.516
Minnesota	3.94	17	.243
Nebraska	4.00	1	.
Nevada (Southern)	4.00	3	.000
New England	3.33	6	.516
New Jersey	4.00	14	.000
New York (Albany)	3.90	10	.316
New York (Western)	3.60	5	.548
North Carolina	4.00	5	.000
Ohio	3.90	10	.316
Oklahoma	3.75	4	.500
Pennsylvania (Central)	4.00	5	.000
Pennsylvania (Philadelphia)	3.94	16	.250
Pennsylvania (Pittsburgh)	4.00	8	.000
South Carolina	3.83	12	.389
Texas (Central)	3.80	10	.422
Texas (Houston)	4.00	13	.000
Texas (North)	3.67	3	.577
Virginia	3.75	4	.500
Washington	4.00	9	.000
Wisconsin	3.75	16	.447
Total	3.85	257	.356

Table I-23: Perceived Value of Working with a Mentor, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.60	5	.548
Arizona	3.86	7	.378
California (Northern)	3.00	1	.
Colorado	4.00	1	.
Florida (South)	3.75	8	.463
Florida (Tampa)	3.75	4	.500
Georgia	3.50	20	.513
Great Plains	3.60	10	.516
Idaho	3.55	11	.522
Illinois (Chicago)	4.00	2	.000
Indiana	3.00	4	.000
Iowa	3.50	2	.707
Louisiana	3.50	2	.707
Michigan	4.00	2	.000
Mid-Atlantic	3.50	6	.548
Minnesota	3.63	16	.500
Nebraska	4.00	1	.
Nevada (Southern)	3.67	3	.577
New England	3.00	5	.000
New Jersey	3.86	14	.363
New York (Albany)	3.30	10	.483
New York (Western)	3.60	5	.548
North Carolina	3.60	5	.548
Ohio	3.50	10	.527
Oklahoma	3.25	4	.500
Pennsylvania (Central)	3.60	5	.548
Pennsylvania (Philadelphia)	3.63	16	.500
Pennsylvania (Pittsburgh)	3.63	8	.518
South Carolina	3.67	12	.492
Texas (Central)	3.70	10	.483
Texas (Houston)	3.75	12	.452
Texas (North)	3.33	3	.577
Virginia	3.75	4	.500
Washington	3.13	8	.354
Wisconsin	3.33	15	.488
Total	3.57	251	.497

Table I-24: Perceived Value of Preparing a Presentation, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.80	5	.447
Arizona	3.57	7	.535
California (Northern)	4.00	1	.
Colorado	4.00	1	.
Florida (South)	3.88	8	.354
Florida (Tampa)	3.25	4	.500
Georgia	3.60	20	.598
Great Plains	3.60	10	.516
Idaho	3.75	12	.622
Illinois (Chicago)	4.00	2	.000
Indiana	3.75	4	.500
Iowa	4.00	2	.000
Louisiana	3.50	2	.707
Michigan	4.00	2	.000
Mid-Atlantic	3.33	6	.816
Minnesota	3.82	17	.393
Nebraska	4.00	1	.
Nevada (Southern)	4.00	3	.000
New England	3.33	6	.516
New Jersey	3.86	14	.363
New York (Albany)	3.50	10	.850
New York (Western)	3.40	5	.894
North Carolina	3.80	5	.447
Ohio	3.80	10	.422
Oklahoma	4.00	4	.000
Pennsylvania (Central)	3.60	5	.548
Pennsylvania (Philadelphia)	3.80	15	.414
Pennsylvania (Pittsburgh)	3.88	8	.354
South Carolina	3.83	12	.389
Texas (Central)	3.80	10	.422
Texas (Houston)	3.77	13	.439
Texas (North)	3.33	3	.577
Virginia	4.00	4	.000
Washington	3.67	9	.500
Wisconsin	3.67	15	.488
Total	3.72	255	.501

Table I-25: Perceived Value of Delivering a Presentation, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.80	5	.447
Arizona	4.00	7	.000
California (Northern)	4.00	1	.
Colorado	4.00	1	.
Florida (South)	3.88	8	.354
Florida (Tampa)	3.25	4	.957
Georgia	3.85	20	.366
Great Plains	3.70	10	.483
Idaho	3.67	12	.888
Illinois (Chicago)	4.00	2	.000
Indiana	3.75	4	.500
Iowa	4.00	2	.000
Louisiana	3.50	2	.707
Michigan	4.00	2	.000
Mid-Atlantic	3.33	6	.816
Minnesota	3.94	17	.243
Nebraska	4.00	1	.
Nevada (Southern)	4.00	3	.000
New England	3.67	6	.516
New Jersey	3.86	14	.363
New York (Albany)	3.70	10	.675
New York (Western)	3.60	5	.548
North Carolina	4.00	5	.000
Ohio	3.80	10	.422
Oklahoma	4.00	4	.000
Pennsylvania (Central)	3.80	5	.447
Pennsylvania (Philadelphia)	3.64	14	.633
Pennsylvania (Pittsburgh)	4.00	8	.000
South Carolina	3.92	12	.289
Texas (Central)	4.00	10	.000
Texas (Houston)	4.00	13	.000
Texas (North)	3.33	3	.577
Virginia	4.00	4	.000
Washington	4.00	9	.000
Wisconsin	3.73	15	.594
Total	3.82	254	.461

Table I-26: Perceived Value of the Competition, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	4.00	5	.000
Arizona	4.00	7	.000
California (Northern)	4.00	1	.
Colorado	4.00	1	.
Florida (South)	3.88	8	.354
Florida (Tampa)	3.25	4	.500
Georgia	3.80	20	.410
Great Plains	3.70	10	.483
Idaho	3.67	12	.492
Illinois (Chicago)	4.00	2	.000
Indiana	3.50	4	.577
Iowa	4.00	2	.000
Louisiana	4.00	2	.000
Michigan	4.00	2	.000
Mid-Atlantic	3.67	6	.516
Minnesota	3.88	17	.332
Nebraska	4.00	1	.
Nevada (Southern)	4.00	3	.000
New England	3.50	6	.548
New Jersey	3.71	14	.611
New York (Albany)	3.90	10	.316
New York (Western)	4.00	5	.000
North Carolina	3.60	5	.548
Ohio	3.60	10	.966
Oklahoma	4.00	4	.000
Pennsylvania (Central)	3.75	4	.500
Pennsylvania (Philadelphia)	3.71	14	.611
Pennsylvania (Pittsburgh)	4.00	8	.000
South Carolina	3.92	12	.289
Texas (Central)	3.30	10	.949
Texas (Houston)	3.92	12	.289
Texas (North)	3.67	3	.577
Virginia	3.75	4	.500
Washington	3.78	9	.441
Wisconsin	3.69	16	.479
Total	3.77	253	.491

Table I-27:

Proportion of Mentors Reporting that Future City Met Their Expectations this Year, by Region

		Exceeded	Fully met	Partially met	Did not meet	Missing	Total
Alabama	Count	3	2	0	0	0	5
	% within region	60.0%	40.0%	.0%	.0%	.0%	100.0%
Arizona	Count	4	2	0	0	1	7
	% within region	57.1%	28.6%	.0%	.0%	14.3%	100.0%
California (Northern)	Count	0	1	0	0	0	1
	% within region	.0%	100.0%	.0%	.0%	.0%	100.0%
Colorado	Count	1	0	0	0	0	1
	% within region	100.0%	.0%	.0%	.0%	.0%	100.0%
Florida (South)	Count	4	3	0	1	0	8
	% within region	50.0%	37.5%	.0%	12.5%	.0%	100.0%
Florida (Tampa)	Count	1	2	0	0	1	4
	% within region	25.0%	50.0%	.0%	.0%	25.0%	100.0%
Georgia	Count	8	12	0	1	0	21
	% within region	38.1%	57.1%	.0%	4.8%	.0%	100.0%
Great Plains	Count	5	5	0	0	0	10
	% within region	50.0%	50.0%	.0%	.0%	.0%	100.0%
Idaho	Count	2	9	1	0	0	12
	% within region	16.7%	75.0%	8.3%	.0%	.0%	100.0%
Illinois (Chicago)	Count	0	2	0	0	0	2
	% within region	.0%	100.0%	.0%	.0%	.0%	100.0%
Indiana	Count	0	4	0	0	0	4
	% within region	.0%	100.0%	.0%	.0%	.0%	100.0%
Iowa	Count	0	2	0	0	0	2
	% within region	.0%	100.0%	.0%	.0%	.0%	100.0%
Louisiana	Count	1	1	0	0	0	2
	% within region	50.0%	50.0%	.0%	.0%	.0%	100.0%
Michigan	Count	1	1	0	0	0	2
	% within region	50.0%	50.0%	.0%	.0%	.0%	100.0%
Mid-Atlantic	Count	0	6	0	0	0	6
	% within region	.0%	100.0%	.0%	.0%	.0%	100.0%
Minnesota	Count	4	11	0	2	0	17
	% within region	23.5%	64.7%	.0%	11.8%	.0%	100.0%
Nebraska	Count	1	0	0	0	0	1
	% within region	100.0%	.0%	.0%	.0%	.0%	100.0%

		Exceeded	Fully met	Partially met	Did not meet	Missing	Total
Nevada (Southern)	Count	1	2	0	0	0	3
	% within region	33.3%	66.7%	.0%	.0%	.0%	100.0%
New England	Count	1	3	1	1	0	6
	% within region	16.7%	50.0%	16.7%	16.7%	.0%	100.0%
New Jersey	Count	9	6	0	0	0	15
	% within region	60.0%	40.0%	.0%	.0%	.0%	100.0%
New York (Albany)	Count	7	2	0	1	0	10
	% within region	70.0%	20.0%	.0%	10.0%	.0%	100.0%
New York (Western)	Count	2	2	0	1	0	5
	% within region	40.0%	40.0%	.0%	20.0%	.0%	100.0%
North Carolina	Count	3	2	0	0	0	5
	% within region	60.0%	40.0%	.0%	.0%	.0%	100.0%
Ohio	Count	2	6	0	1	1	10
	% within region	20.0%	60.0%	.0%	10.0%	10.0%	100.0%
Oklahoma	Count	1	1	1	1	1	5
	% within region	20.0%	20.0%	20.0%	20.0%	20.0%	100.0%
Pennsylvania (Central)	Count	0	3	0	1	1	5
	% within region	.0%	60.0%	.0%	20.0%	20.0%	100.0%
Pennsylvania (Philadelphia)	Count	6	9	0	1	0	16
	% within region	37.5%	56.3%	.0%	6.3%	.0%	100.0%
Pennsylvania (Pittsburgh)	Count	2	6	0	0	0	8
	% within region	25.0%	75.0%	.0%	.0%	.0%	100.0%
South Carolina	Count	5	4	0	3	0	12
	% within region	41.7%	33.3%	.0%	25.0%	.0%	100.0%
Texas (Central)	Count	4	2	0	2	2	10
	% within region	40.0%	20.0%	.0%	20.0%	20.0%	100.0%
Texas (Houston)	Count	5	7	1	0	0	13
	% within region	38.5%	53.8%	7.7%	.0%	.0%	100.0%
Texas (North)	Count	1	2	0	0	0	3
	% within region	33.3%	66.7%	.0%	.0%	.0%	100.0%
Virginia	Count	3	1	0	0	0	4
	% within region	75.0%	25.0%	.0%	.0%	.0%	100.0%
Washington	Count	4	5	0	0	0	9
	% within region	44.4%	55.6%	.0%	.0%	.0%	100.0%
Wisconsin	Count	3	11	1	3	0	18
	% within region	16.7%	61.1%	5.6%	16.7%	.0%	100.0%

Table I-28:

Proportion of Mentors Reporting that Future City Represents the Field of Engineering, by Region

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Missing	Total
Alabama	Count	4	1	0	0	0	0	5
	% within region	80.0%	20.0%	.0%	.0%	.0%	.0%	100.0%
Arizona	Count	4	2	0	1	0	0	7
	% within region	57.1%	28.6%	.0%	14.3%	.0%	.0%	100.0%
California (Northern)	Count	0	1	0	0	0	0	1
	% within region	.0%	100.0%	.0%	.0%	.0%	.0%	100.0%
Colorado	Count	1	0	0	0	0	0	1
	% within region	100.0%	.0%	.0%	.0%	.0%	.0%	100.0%
Florida (South)	Count	4	3	0	0	1	0	8
	% within region	50.0%	37.5%	.0%	.0%	12.5%	.0%	100.0%
Florida (Tampa)	Count	1	2	0	1	0	0	4
	% within region	25.0%	50.0%	.0%	25.0%	.0%	.0%	100.0%
Georgia	Count	12	9	0	0	0	0	21
	% within region	57.1%	42.9%	.0%	.0%	.0%	.0%	100.0%
Great Plains	Count	9	1	0	0	0	0	10
	% within region	90.0%	10.0%	.0%	.0%	.0%	.0%	100.0%
Idaho	Count	5	7	0	0	0	0	12
	% within region	41.7%	58.3%	.0%	.0%	.0%	.0%	100.0%
Illinois (Chicago)	Count	1	1	0	0	0	0	2
	% within region	50.0%	50.0%	.0%	.0%	.0%	.0%	100.0%
Indiana	Count	1	2	1	0	0	0	4
	% within region	25.0%	50.0%	25.0%	.0%	.0%	.0%	100.0%
Iowa	Count	1	0	1	0	0	0	2
	% within region	50.0%	.0%	50.0%	.0%	.0%	.0%	100.0%
Louisiana	Count	2	0	0	0	0	0	2
	% within region	100.0%	.0%	.0%	.0%	.0%	.0%	100.0%
Michigan	Count	1	1	0	0	0	0	2
	% within region	50.0%	50.0%	.0%	.0%	.0%	.0%	100.0%
Mid-Atlantic	Count	1	5	0	0	0	0	6
	% within region	16.7%	83.3%	.0%	.0%	.0%	.0%	100.0%
Minnesota	Count	13	4	0	0	0	0	17
	% within region	76.5%	23.5%	.0%	.0%	.0%	.0%	100.0%
Nebraska	Count	1	0	0	0	0	0	1

		Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Missing	Total
	% within region	100.0%	.0%	.0%	.0%	.0%	.0%	100.0%
Nevada (Southern)	Count	3	0	0	0	0	0	3
	% within region	100.0%	.0%	.0%	.0%	.0%	.0%	100.0%
New England	Count	3	3	0	0	0	0	6
	% within region	50.0%	50.0%	.0%	.0%	.0%	.0%	100.0%
New Jersey	Count	12	3	0	0	0	0	15
	% within region	80.0%	20.0%	.0%	.0%	.0%	.0%	100.0%
New York (Albany)	Count	7	3	0	0	0	0	10
	% within region	70.0%	30.0%	.0%	.0%	.0%	.0%	100.0%
New York (Western)	Count	2	2	1	0	0	0	5
	% within region	40.0%	40.0%	20.0%	.0%	.0%	.0%	100.0%
North Carolina	Count	5	0	0	0	0	0	5
	% within region	100.0%	.0%	.0%	.0%	.0%	.0%	100.0%
Ohio	Count	5	3	1	0	1	0	10
	% within region	50.0%	30.0%	10.0%	.0%	10.0%	.0%	100.0%
Oklahoma	Count	2	1	0	1	0	1	5
	% within region	40.0%	20.0%	.0%	20.0%	.0%	20.0%	100.0%
Pennsylvania (Central)	Count	0	3	1	1	0	0	5
	% within region	.0%	60.0%	20.0%	20.0%	.0%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	10	6	0	0	0	0	16
	% within region	62.5%	37.5%	.0%	.0%	.0%	.0%	100.0%
Pennsylvania (Pittsburgh)	Count	6	2	0	0	0	0	8
	% within region	75.0%	25.0%	.0%	.0%	.0%	.0%	100.0%
South Carolina	Count	5	6	1	0	0	0	12
	% within region	41.7%	50.0%	8.3%	.0%	.0%	.0%	100.0%
Texas (Central)	Count	6	3	1	0	0	0	10
	% within region	60.0%	30.0%	10.0%	.0%	.0%	.0%	100.0%
Texas (Houston)	Count	6	5	1	0	0	1	13
	% within region	46.2%	38.5%	7.7%	.0%	.0%	7.7%	100.0%
Texas (North)	Count	1	2	0	0	0	0	3
	% within region	33.3%	66.7%	.0%	.0%	.0%	.0%	100.0%
Virginia	Count	2	2	0	0	0	0	4
	% within region	50.0%	50.0%	.0%	.0%	.0%	.0%	100.0%
Washington	Count	1	6	2	0	0	0	9
	% within region	11.1%	66.7%	22.2%	.0%	.0%	.0%	100.0%
Wisconsin	Count	7	10	0	0	0	1	18
	% within region	38.9%	55.6%	.0%	.0%	.0%	5.6%	100.0%

Table I-29: Perceived Value of the New FutureCity.org Website, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.60	5	.548
Arizona	3.57	7	.535
California (Northern)	2.00	1	.
Colorado	4.00	1	.
Florida (South)	3.13	8	.835
Florida (Tampa)	3.25	4	.957
Georgia	2.75	16	.775
Great Plains	3.30	10	.675
Idaho	3.44	9	1.014
Illinois (Chicago)	3.00	1	.
Indiana	2.75	4	.500
Iowa	2.00	2	1.414
Louisiana	3.00	2	.000
Michigan	3.00	2	.000
Mid-Atlantic	3.50	6	.548
Minnesota	3.50	16	.730
Nevada (Southern)	2.67	3	.577
New England	3.67	3	.577
New Jersey	3.31	13	.751
New York (Albany)	2.89	9	.601
New York (Western)	3.00	4	.000
North Carolina	3.00	5	.707
Ohio	2.83	6	.408
Oklahoma	3.00	4	1.155
Pennsylvania (Central)	2.40	5	.894
Pennsylvania (Philadelphia)	3.25	16	.775
Pennsylvania (Pittsburgh)	3.33	6	.516
South Carolina	3.08	12	.793
Texas (Central)	3.56	9	.527
Texas (Houston)	3.67	12	.492
Texas (North)	3.33	3	.577
Virginia	3.75	4	.500
Washington	3.38	8	.518
Wisconsin	3.23	13	.725
Total	3.22	229	.735

Table I-30: Perceived Value of the New Handbook, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.40	5	.548
Arizona	3.57	7	.535
California (Northern)	3.00	1	.
Florida (South)	3.25	8	.886
Florida (Tampa)	3.25	4	.957
Georgia	2.94	18	.998
Great Plains	3.56	9	.527
Idaho	3.50	10	.527
Illinois (Chicago)	3.00	1	.
Indiana	3.33	3	.577
Iowa	3.00	2	.000
Louisiana	3.50	2	.707
Michigan	3.50	2	.707
Mid-Atlantic	3.17	6	.408
Minnesota	3.20	15	.561
Nebraska	4.00	1	.
Nevada (Southern)	3.33	3	.577
New England	3.00	4	.000
New Jersey	3.18	11	.751
New York (Albany)	2.67	9	.866
New York (Western)	3.25	4	.500
North Carolina	3.00	3	.000
Ohio	2.33	6	.816
Oklahoma	2.75	4	.957
Pennsylvania (Central)	2.80	5	.837
Pennsylvania (Philadelphia)	3.47	15	.516
Pennsylvania (Pittsburgh)	3.57	7	.535
South Carolina	2.92	12	.669
Texas (Central)	3.38	8	.744
Texas (Houston)	3.60	10	.516
Texas (North)	3.00	2	.000
Virginia	3.50	4	1.000
Washington	3.57	7	.535
Wisconsin	3.00	9	.500
Total	3.21	217	.701

Table I-31: Perceived Value of the New Learning Blocks, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.33	3	1.155
Arizona	3.40	5	.894
California (Northern)	3.00	1	.
Florida (South)	2.88	8	1.126
Florida (Tampa)	3.00	4	.816
Georgia	2.40	10	.966
Great Plains	3.43	7	.535
Idaho	2.83	6	1.169
Illinois (Chicago)	3.00	1	.
Indiana	3.00	2	.000
Iowa	3.50	2	.707
Louisiana	3.50	2	.707
Michigan	3.00	2	.000
Mid-Atlantic	3.00	5	.707
Minnesota	3.08	12	.515
Nevada (Southern)	3.00	2	1.414
New England	3.00	3	.000
New Jersey	3.27	11	.647
New York (Albany)	2.50	4	.577
New York (Western)	3.00	2	.000
North Carolina	3.00	3	.000
Ohio	2.00	2	1.414
Oklahoma	3.50	2	.707
Pennsylvania (Central)	2.33	3	.577
Pennsylvania (Philadelphia)	3.00	10	.667
Pennsylvania (Pittsburgh)	3.20	5	.837
South Carolina	3.40	10	.843
Texas (Central)	3.57	7	.535
Texas (Houston)	3.56	9	.527
Texas (North)	3.00	1	.
Virginia	3.00	2	.000
Washington	2.83	6	1.169
Wisconsin	2.67	9	.707
Total	3.06	161	.785

Table I-32: Perceived Value of the New Online Calendar, from Mentor Perspective, by Region

	Mean	N	Std. Deviation
Alabama	3.00	2	1.414
Arizona	3.80	5	.447
California (Northern)	3.00	1	.
Colorado	4.00	1	.
Florida (South)	2.88	8	1.126
Florida (Tampa)	2.50	4	.577
Georgia	2.36	11	.809
Great Plains	3.43	7	.535
Idaho	2.83	6	.983
Illinois (Chicago)	3.00	1	.
Indiana	3.50	2	.707
Iowa	3.00	2	1.414
Louisiana	3.00	2	.000
Michigan	3.00	2	.000
Mid-Atlantic	3.20	5	.447
Minnesota	3.10	10	.738
Nevada (Southern)	3.00	3	1.732
New England	3.67	3	.577
New Jersey	3.36	11	.674
New York (Albany)	3.00	5	.000
New York (Western)	3.00	1	.
North Carolina	3.00	4	.000
Ohio	3.00	5	.707
Oklahoma	4.00	2	.000
Pennsylvania (Central)	2.50	2	.707
Pennsylvania (Philadelphia)	2.92	12	.669
Pennsylvania (Pittsburgh)	3.50	2	.707
South Carolina	3.00	10	.667
Texas (Central)	3.38	8	.518
Texas (Houston)	3.60	10	.516
Texas (North)	2.50	2	.707
Virginia	3.00	3	1.000
Washington	2.67	6	.816
Wisconsin	2.67	12	.651
Total	3.05	170	.756

Table I-33:

Proportion of Mentors Who Would Recommend Future City to a Colleague, by Region

		Yes	Maybe	No	Missing	Total
Alabama	Count	5	0	0	0	5
	% within region	100.0%	.0%	.0%	.0%	100.0%
Arizona	Count	7	0	0	0	7
	% within region	100.0%	.0%	.0%	.0%	100.0%
California (Northern)	Count	1	0	0	0	1
	% within region	100.0%	.0%	.0%	.0%	100.0%
Colorado	Count	1	0	0	0	1
	% within region	100.0%	.0%	.0%	.0%	100.0%
Florida (South)	Count	7	1	0	0	8
	% within region	87.5%	12.5%	.0%	.0%	100.0%
Florida (Tampa)	Count	4	0	0	0	4
	% within region	100.0%	.0%	.0%	.0%	100.0%
Georgia	Count	18	3	0	0	21
	% within region	85.7%	14.3%	.0%	.0%	100.0%
Great Plains	Count	9	0	0	1	10
	% within region	90.0%	.0%	.0%	10.0%	100.0%
Idaho	Count	12	0	0	0	12
	% within region	100.0%	.0%	.0%	.0%	100.0%
Illinois (Chicago)	Count	2	0	0	0	2
	% within region	100.0%	.0%	.0%	.0%	100.0%
Indiana	Count	3	1	0	0	4
	% within region	75.0%	25.0%	.0%	.0%	100.0%
Iowa	Count	2	0	0	0	2
	% within region	100.0%	.0%	.0%	.0%	100.0%
Louisiana	Count	2	0	0	0	2
	% within region	100.0%	.0%	.0%	.0%	100.0%
Michigan	Count	2	0	0	0	2
	% within region	100.0%	.0%	.0%	.0%	100.0%
Mid-Atlantic	Count	6	0	0	0	6
	% within region	100.0%	.0%	.0%	.0%	100.0%
Minnesota	Count	17	0	0	0	17
	% within region	100.0%	.0%	.0%	.0%	100.0%
Nebraska	Count	1	0	0	0	1
	% within region	100.0%	.0%	.0%	.0%	100.0%
Nevada (Southern)	Count	3	0	0	0	3

		Yes	Maybe	No	Missing	Total
	% within region	100.0%	.0%	.0%	.0%	100.0%
New England	Count	5	1	0	0	6
	% within region	83.3%	16.7%	.0%	.0%	100.0%
New Jersey	Count	14	0	0	1	15
	% within region	93.3%	.0%	.0%	6.7%	100.0%
New York (Albany)	Count	10	0	0	0	10
	% within region	100.0%	.0%	.0%	.0%	100.0%
New York (Western)	Count	3	1	0	1	5
	% within region	60.0%	20.0%	.0%	20.0%	100.0%
North Carolina	Count	5	0	0	0	5
	% within region	100.0%	.0%	.0%	.0%	100.0%
Ohio	Count	9	0	1	0	10
	% within region	90.0%	.0%	10.0%	.0%	100.0%
Oklahoma	Count	3	1	0	1	5
	% within region	60.0%	20.0%	.0%	20.0%	100.0%
Pennsylvania (Central)	Count	5	0	0	0	5
	% within region	100.0%	.0%	.0%	.0%	100.0%
Pennsylvania (Philadelphia)	Count	16	0	0	0	16
	% within region	100.0%	.0%	.0%	.0%	100.0%
Pennsylvania (Pittsburgh)	Count	8	0	0	0	8
	% within region	100.0%	.0%	.0%	.0%	100.0%
South Carolina	Count	11	1	0	0	12
	% within region	91.7%	8.3%	.0%	.0%	100.0%
Texas (Central)	Count	6	3	1	0	10
	% within region	60.0%	30.0%	10.0%	.0%	100.0%
Texas (Houston)	Count	12	0	0	1	13
	% within region	92.3%	.0%	.0%	7.7%	100.0%
Texas (North)	Count	2	1	0	0	3
	% within region	66.7%	33.3%	.0%	.0%	100.0%
Virginia	Count	4	0	0	0	4
	% within region	100.0%	.0%	.0%	.0%	100.0%
Washington	Count	9	0	0	0	9
	% within region	100.0%	.0%	.0%	.0%	100.0%
Wisconsin	Count	17	0	0	1	18
	% within region	94.4%	.0%	.0%	5.6%	100.0%