



Gateway Academy Camps



By Ray Tracy



Project Lead the Way has two areas: Engineering and Biomedical Sciences Over the past decade, PLTW realized that they needed to start promoting engineering at an earlier age to develop interest in that area and in their courses offered at the high school level. They decided that they would offer the GTT or Gateway To Technology courses and offer the Gateway Academy Camps. School districts can provide a camp under the following conditions:

- A teacher must have been trained to teach a PLTW course
- The program must register their camp with PLTW

We follow the PLTW camp guidelines. We then enhance the camps in Sioux Falls with the inclusion of Biomedical Sciences. The camps are one week long (five days). The purpose for the camps is to enhance middle school student's interest in the areas of science and engineering. Through the various activities students are introduced to robotics, design challenges, dissections, egg drops, rocketry, and tours. Camps must be registered with PLTW to receive activities and be recognized.

Our primary goal is to create a feeder project for the high school programs. Since we do not currently have PLTW middle school programs in Sioux Falls and Brookings, we are looking at creating those opportunities. Sioux Falls is already discussing integrating the middle school courses into their STEM program. Canton is the only district that has a middle school program in SD.

Through the registration and teacher quality, the camps are sent the activities through the Network. This process allows the teachers to access the activities needed for the camps. This has been the development of the camps:

The Camps and Funding

Summer 2010 (EPSCoR YI)

Canton
Watertown

Summer 2011 (EPSCoR YII)

Canton
Sioux Falls (2)
Rapid City
Sturgis
Platte-Geddes
Brookings

Summer 2012 (EPSCoR YIII)

Canton
Sioux Falls (5)
Brookings (2)--One camp is funded by Daktronics

Summer 2013 (EPSCoR YIV) Tentative

Canton
Brookings (1 +)
Sioux Falls (5)
Watertown



Specific Camp Information

Brookings has two camps. One camp is supported with EPSCoR and the other is supported by Daktronics (has yet to occur—40 student impact) - Jane Sylie is the camp leader

Canton had one camp this year supported by EPSCoR (20 student impact) - Russ Swanson and Jim Martinson are the camp leaders

Sioux Falls had five camps supported by EPSCoR (100 student impact and additional 50 on waiting list) - Christy Carlson and Allison Hutchinson are the camp leaders



Current Activities

- Creating a more comprehensive data collection system-survey via Google Docs
- Students are surveyed on the camp and their interests in Science and Math Expanding camps
- Camps have been used in the past to generate interest in school districts interested in starting PLTW. Rapid City is a prime example of a district that did not implement PLTW until after the students experienced the camp.
- Also, we are working with Lake Area Multi-District to offer a camp once again after their first attempt was not as successful. The previous camp competed against other activities.

Future Goals

- Establishing plans to continue the camps (sustainability) and increasing the locations in other PLTW districts
- Update the website with new data and upcoming events

Media

Kelo Land <http://www.keloland.com/news/NewsDetail6374.cfm?id=132094#.T7706R5-mr0.facebook>

KDLT

http://www.kdlt.com/index.php?option=com_content&task=view&id=17753&Itemid=72&mosmsg=Thanks+for+your+submission

Data

2010 Camps

District	Males	Females	Total
Canton	14	6	20
Sioux Falls	13	5	18
Watertown	12	4	16
Total	39	15	54

2011 Camps

District	Males	Females	Total
Sioux Falls (1)	11	9	20
Sioux Falls (2)	13	7	20
Platte Geddes	9	3	12
Rapid City	13	5	18
Brookings	12	7	19
Sturgis	10	10	20
Total	68	41	109

Gateway Camps

Year	Students
2010	54
2011	109
Total	163

Females

Year	Students
2010	15
2011	41
Total	56

Males

Year	Students
2010	39
2011	68
Total	107



Grade Level of Participants by Camp Location that took the survey-2011

Grade	Sioux Falls	Brookings	Platte Geddes	Sturgis	Rapid City	Total
6	21	7	0	9	1	38
7	9	8	3	6	5	31
8	4	1	2	1	9	17
Unknown	2	0	0	0	0	2
Total	36	16	5	16	15	88

Overall Satisfaction- 2011

	Sioux Falls	Brookings	Platte Geddes	Sturgis	Rapid City	Total	
I had fun at the camp	35	15	5	16	15	86	98%
I would attend a camp next year	33	14	5	16	15	83	94%
I learned from the Activities	35	14	4	16	15	84	95%
I liked the lunches	29	15	5	11	14	74	84%
I will take three or more math classes in HS	28	10	5	10	13	66	75%
I will take three or more science classes in HS	27	12	5	10	15	69	78%
I have used SDMyLife	9	0	4	2	9	24	27%

List of Careers you would like to enter- 2011

	Sioux Falls	Brookings	Platte Geddes	Sturgis	Rapid City	Total	
Aviation	12	3	1	2	3	21	24%
Computer Technology	16	9	1	3	5	34	39%
Engineering	19	10	4	5	11	49	56%
Medicine/ Health Care	12	3	1	6	6	28	32%
Other Math or Science Careers	14	8	3	3	7	35	40%

How did you hear about the Gateway Academy- 2011

	Sioux Falls	Brookings	Platte Geddes	Sturgis	Rapid City	Total
Parent	12	0	0	0	0	12
Grandparent	2	1	0	0	0	3
School	5	2	2	7	0	16
Counselor	3	0	0	0	0	3
Teacher	0	11	2	8	15	36
Award Program	2	0	0	0	0	2
Friends	6	1	1	1	0	9
Recommended	1	0	0	0	0	1
Email	1	0	0	0	0	1

Favorite Activities 2011

	Sioux Falls	Brookings	Platte Geddes	Sturgis	Rapid City	Total
Water Rockets	13	9	0	8	6	36
Robots	12	0	0	4	7	23
Air Planes	0	1	0	3	2	6
Morse Code	0	0	0	0	3	3
Battlefield	0	0	0	0	6	6
Solar Cars	1	12	0	2	1	16
Paper Structure Building	1	0	0	0	1	2
Dissections	11	0	0	0	0	11
Flying Gliders	11	0	0	1	2	14
Eggstronaut	13	0	0	0	0	13
Tallest Tower	5	0	0	0	0	5
Bridge Design	9	0	0	0	0	9
Wind Turbines	0	6	0	0	0	6
3D Inventor	1	0	0	0	0	1
Mouse Trap Catapults	0	8	0	0	0	8
3D Names	0	4	0	0	0	4
Kite	0	2	0	0	0	2
Field Trips:						
Sanford Health	9	0	0	0	0	9
Air Force Reserve Base	11	0	0	0	0	11
Colorado Technical University- CSI	8	0	0	0	0	8
Children's Museum	0	1	0	0	0	1