STEM Action Center Board Meeting Minutes
June 4, 2014 • 3:00pm
Utah State Office of Education: 250 E. 500 S., Salt Lake City

Members Present:	Blair Carruth, Gene Levinzon, Stan Lockhart, Martell Menlove, Jefferson Moss, Jeffery Nelson, Tami Pyfer
Members Absent:	Robert Brems, Spencer Eccles, Brad Rencher, Bert Vanderheiden
Staff:	Meredith Mannebach, Sue Redington, Mitchell Jorgensen, Tami Goetz, Jenna Johnson, Susan Eisenman
Visitors:	Howard Stephenson, Darrel L. Hammon, , Sarah Brasiel, Maggie Ostler, Quinn Kendall, Norm LeClair, Chris Cochella, Dr. Robyn Hyde, Kevin Jessing

I. Welcome and Related Business

Jeff Nelson, STEM Action Center Board Chairman, called the meeting to order, introduced and welcomed the group, and asked Senator Stephenson to report on the New York STEM Conference. Senator Stephenson was excited about the progress and momentum of the STEM AC, and its efforts to raise awareness and promote STEM at a State and National level. Jeff Nelson then asked the board members to approve the minutes from the meeting.

i. Approve Minutes

MOTION: JEFFERSON MOSS MOVED TO APPROVE THE MINUTES, SECONDED BY GENE LEVINZON. THE MOTION WAS UNANAMOUSLY APPROVED.

ii. Introduction of Jenna Johnson as a STEM Fellow.

iii. Gene Levinzon, report on his reaching out to principals in Salt Lake City District.

Principals expressed an interest in the Board and the STEM AC Staff to meet teachers, even before the approaching school year. This will be a great opportunity to actually see what our impact is. Jeff Nelson expressed that it would also be a good opportunity to reach out, gain understanding and build relationships.

II. Presentation

Dr. Robyn Hyde- Intro to Chemistry Professor at Westminster

Jeff had viewed Robyn's presentation once before and was impressed by the creativity of teaching chemistry though food and cooking.

Robyn states that her course is application based because the majority of her students report no enjoying chemistry. She is sure they enjoy the colors and the explosions of the sciences, but that when it comes to chemistry principles, students find it difficult to understand. Dr. Hyde's course is online, but she wanted to give students a laboratory experience, even though the online medium. She uses cooking as a "hook" for students to take her course, but still prepares her lectures as chemistry based, and not cooking based. She begins her course with a foundation of

basic chemistry principles, and then she builds on their knowledge base through laboratory assignments. Dr. Hyde uses kitchen "experiments" to teach even difficult chemistry principles like solubility, saturation and heterogeneous mixtures though making butter, sugar solutions such as fudge, and brew tea. The course encourages learning by grading them on their chemistry knowledge through written essays where students are required show their understanding of chemical principles. Dr. Hyde hopes that this type of course will excite her students to continue learning and using chemistry.

III. Board Discussion

i. Follow up: Demographics of Schools

Dr. Sarah Brasiel, USU

Sarah begins by giving an update on the math software pilot program, and the responses of teachers when asked about their desire to continue with the software. There still have not been many responses, but teachers are receiving weekly reminders through email. There is also the issue of some schools/teachers deciding to not use the program(s) or decreasing their usage due to end-of-level testing. Dr. Brasiel discussed the importance of gathering data, and even providing incentives for schools or districts that have complete data. This might be the case when schools and districts receive the program at no cost, and their motivation to report data may decrease. These are things for the STEM AC to think about as we approach the upcoming school year.

A question was raised about student performance data, and how there is not another independent measure other than State Assessments- Sarah answered by saying that a decision was made early in the process that considered funding and time constraints, and the pre post data was most effective coming from State Assessments and provider information. It was stated that this is not typically how measurements are taken in such a case, and it would have been more longitudinal and more ideal to have another independent measure. Sarah continued to discuss the data findings and answered questions about specifics such as more males than females, disadvantaged students, and missing data. Jeff Nelson stressed the importance of looking at our means of data collection and how we can have more complete data.

ii. STEM Center Grant Updates

Meredith Mannebach, STEM AC Program Manager

Meredith Mannebach informs the board that many grantors have approached us looking to fund STEM projects, namely JP Morgan for afterschool support. Meredith expressed excitement about these opportunities and a possible partnership with USOE.

There was also a discussion started by Meredith about a possible change in CTE curriculum that would allow for more chemistry and science to be expressed through the CTE and Foods course in 8th and 9th grades (one of the highest enrolled courses). Granite School District is working on a grant currently to acquire funding for this project.

The US Department of Labor has a grant that would involve Weber State, USU, UVU, Mountainland Applied Tech, Davis Applied Tech, Davis SD, Ogden SD, and Granite SD to look at injection moldings and a pathway for certification of HS students in that field.

Tami Goetz joins the meeting and discusses another grant in process is the DWs grant. DWS has offered two different grant opportunities, one for in-school hours and another for afterschool hours. Tami is still figuring out where the STEM AC can play a role in the grant world, perhaps in facilitating others. Jeff Nelson agreed with Tami in that the STEM AC can

be a great aggregator. Tami specifically mentions Granite and Alpine school districts coming together to apply for one of the grants.

IV. Presentation

Project-Based Learning, Kevin Jessing, GOED

Kevin defines project-based learning as prepared students with business in the execution of real-world projects. He stresses the importance of involving businesses as a way to use alternative resources and funding. Paid internships are one example of a project-based learning model, and even part-time employment that would help students learn technical skills. Research indicates that students are not adequately prepared with skills that are required in the work force, especially so in a STEM field. Kevin brings up an important point that collaboration in school can often be discouraged, and even interpreted as cheating, but in the workforce it can be looked at as a valuable skill. BioInnovations Gateway (BiG) is an example of a place in Salt Lake City that offers project-based learning. This is an extension of CTE education inside schools. Utah is unique in this way, but Tami and Kevin both agree there is some work that should be done for IT education.

V. Adjournment

Jeff reviews decisions made in previous meetings regarding funding and being able to receive and disperse funds, and more updates will be given in future meetings.

MOTION: JEFF NELSON MOVES TO ADJOURN THE MEETING, JEFFERSON MOSS SECONDS THE MOTION. THE MOTION WAS UNANAMOUSLY APPROVED.