**6th Annual Life Sciences Summit**

February 23, 2011

Douglas, WY

**N = 33**

1. **Please rate the overall quality of the day’s work.**

Ratings: 10, 10, 7, 9, 8, 8, 8, 8, 10, 10, 10, 8, 9, 10, 7, 9, 8, 9, 10, 9, 9, 10, 8, 8, 9, 9.9, 8, 8, 9, 8, 10, 8 (t=281.9, n=32)

*Average Rating: 8.81*

* Always great to find out what K-16 is doing in the classroom.
* A good start – more time for this process.
* Beyond talking about our specific topic we also had a wonderful conversation about what’s happening at each level. Treat to connect with others around the state – new resources and friends.
* Enjoyed talking with others; would have also liked to walk with K-5 teachers.
* Expectations of the teacher is critical to student learning.
* Good day, always good to work with peers!
* This was a really great conference. I wonder if “newer” research on cognitive taxonomies could have been discussed (e.g., Duschel and/or Marzono)?
* Our table discussions were very interesting and made me think lots about how to approach my life science and biology class. This will also filter into my PS classes.
* Highly informative. I gained much practical knowledge I will use in my college classes.
* Always enjoy the collegiality. Some of the discussions at the end of the session were too lengthy. Having time to print bullet-points from each table would have been helpful.
* Each task could have been its own day; loved the discussion with my peers.
* It was very useful to determine what should be assessed. I think the next step is to determine how to assess and create consistent assessments for all levels.
* Morning with helping each other Bloom Up was so helpful.
* Enjoyed new format and new direction.
* Great conversation and help with assessing particular topics.
* I really felt this was a valuable experience to break out the different areas of life science. I believe this could have been valuable for other sciences.
* I’m always more productive working with others, especially those who many not always think as I do.
* I really enjoyed “Blooming Up” questions but would like more time to discuss strategies used and challenges when teaching biology at the different levels.
* Good conversations, it’s great to interact and collaborate with new colleagues.
* The group fluctuated as to contribution but the discussion was very rich and informative and I came out with a lot of good info.
* The sharing at the end was not very effective. But I enjoyed the good conversations on science education.
* “Blooming Up” is a difficult task. Especially among other groups of educators.
* Thanks for the opportunity to share with my colleagues.
* Great conversations.
* Last year, we were a little more structured. We were a little too free in our group, though I learned a lot.
* We weren’t always following the “Guide for Work,” but we were doing good work. The discussions about existing tasks were helpful. We didn’t have enough time to write a good assessment, but we did have good discussions about our topic over the different grade levels.
* I really enjoyed all of my discussions today – I learned a lot from my colleagues.
* I would have liked to mix more.
* Great idea and very valuable!
* I was somewhat unclear about what was to be accomplished.
* The interactions with others in our group were useful.
* Best, overall, productive table conversations I have experienced at a summit.

1. **Explain the value you found in “Blooming Up” each other’s questions:**

* Reflection on how to improve instruction before assessment.
* The question in my mind was “why do I ask this question” and how it is relevant. What does this have to do with outcomes, etc.
* It allowed us to discuss what is appropriate at each level and how to be more cognizant about what level we focus our assessment.
* Very valuable; it’s always good to revisit and refresh.
* It gave each of us a better understanding of where the other is coming from and what we can reasonably expect from each other.
* Discovering (rediscovering the process) of thinking in terms of Bloom’s taxonomy.
* Increasing rigor, holding the student and teachers to a higher standard.
* Very powerful to be able to look at another’s work. The evaluative process forced me to look at my work and make improvements.
* New ideas about common concepts and assessment methods were great – not many opportunities to discuss these ideas with peers.
* VERY valuable – learned ways in which I can improve many of my assessment items.
* Nice dialogue across levels.
* It was interesting to listen to my group “Bloom Up” vertically 6-16.
* Helpful to get outside input on my ideas.
* Better understanding of teaching effectiveness.
* By enhancing the questioning you provide a little more rigorous construct for the student learning.
* It really made you focus on learning objectives and what you could do to focus activities to those objectives.
* We spent most of the day talking about the work we brought with us. These conversations were the most valuable.
* We have talked a lot about scaffolding in our district. That’s the general idea.
* It was valuable to hear perspectives of the others. I found that some of my questions were higher level than I thought and I got good ideas from the others about how to make other questions better.
* We skipped task 1 because we felt task 2 was so important.
* I especially liked seeing other people’s exercises and questions. Talking about Blooming Up also made some more relevant to slightly different subjects.
* Helpful to get input from others to improve.
* Good ideas on how to extend activities/assessments.
* This was the best part. The collaborative nature of science really came out as we brainstormed together. I wish we could do this once a month!
* Great! Very helpful – particularly with input from other grade levels.
* Got me thinking at a higher level.
* Many of our assessments were appropriate.
* Recognizing the similarity between the college and junior high/high schools needs and expectations.
* It was great to see and share some examples with colleagues.
* As always, other people’s points of view bring new ideas!

1. **To you, what is the value of developing assessment items collectively?**

* The value is that there are so many like-minded, student oriented people attending.
* Recognizing the commonality of our missions.
* We’re all on the same page as far as expectations.
* Different perspectives (6-16 and content areas). I think more EIED teachers should have come!
* Diverse input/perspectives.
* Collaborating with colleagues is always beneficial! Being able to discuss, explain, and explore together creates much better work.
* The value is high IF the assessment items are actually used and then evaluated to make improvements to what we do.
* Working together takes the pressure off a single person. Multiple levels allows you to share concepts from high school through college.
* Many years of expertise adds to the body of knowledge. My colleagues had tons of good info.
* Having common assessments allows comparison of different school communities as well as flow of ideas to improve assessments.
* The process is what was important, not really the product. Working together to get through the process helped.
* We have input from different educators.
* We developed a great assessment at our table.
* See the different levels and to piggy-back on ideas.
* Perspective.
* Outside opinions/perspectives – new ideas in areas I may not have thought about.
* There is a high value in this task as you realize that there are shared values across educational levels.
* Feedback: others seeing things you miss.
* We have more minds to contribute ideas and critique/improve each ideas. We also have a larger set of students to try the assessments on at different age levels.
* You get a broader view and don’t get locked into your “field.”
* Let’s consider how students are being educated at all grade levels.
* High value – we should be teaching science as a group – gone are the days of one teacher in his own little closed-door room.
* Collective assessment development is valuable because it assumes consistent assessment at similar educational levels. It also allows educators to develop assessments that can track student development over time.
* Two heads or five heads are better than one.
* We decided that assessment depends on the specific lessons with the goal to reach the highest Blooms level as possible.
* Consistency in data on student development.
* Keeping in mind the visions of those teaching content before and after you.
* Difficult – but the idea of using a consistent lab topic – like the tree labs – through levels would be an AMAZING tool, talk about confidence!
* Able to look at student learning from different perspectives.
* Important to get confirmation, validation from colleagues to make sure what is being done is proper/appropriate.
* More heads are better than one – we as teachers work rather in isolation and working collaboratively is more valuable.
* The collaborative nature helps you think outside the box.
* I found developing assessment questions for college courses with K-12 teachers helpful because we can build on what student knowledge/skills expectations are as they move through their education.

1. **How likely are you to teach toward the concept you discussed at tables and use the assessment items that were developed?**

* I was given a lot of valuable resources to visit.
* 100% - all ready to do it and will continue to do so.
* Very likely. I’ve already spent some time adjusting parts and thinking about when it can be used this year.
* I will try to look at my work with a new eye. I will bloom up in my lessons.
* Very likely – I can see/appreciate its value.
* Maybe not exactly, but ideas spread within the discussion will be carried through into my lessons.
* Depending on the class I am assigned, I would definitely teach toward it.
* In the future yes.
* I gathered a multitude of “tools” for my teaching toolbox. Ideas that my MDLG with leagues shared I plan to use the collegiate classroom.
* I will think about the concepts when I plan my lesson/units.
* I will definitely ask students our “favorite” question before next year and bring the answers back.
* Depends on the group. I was in the Nature of Science group and the learning outcome we discussed involved field work, etc. But I could certainly use some of the others. But I must say “teach towards” more than teach with this mind.
* Moderately likely – seems very similar to what I have been doing (with refinements).
* I now see the value of teaching evolution throughout the year in my high school biology class.
* I know I will start asking questions on each test about applications and what cannot be.
* Very likely as it is part of our curriculum.
* Very likely – assessment is as important as instruction.
* I believe I can apply these concepts to my classes even though they are not life sciences in nature.
* I’m very likely to because we chose a topic all of us address in our classes.
* Most likely – it was broad enough to be used in any level/subject.
* Very likely. It will fit in perfectly with my course objectives.
* 0. We didn’t really discuss this – we got frustrated with reinventing the curriculum. We spent more time sharing and comparing expectations.
* In my cases it appears we are already teaching towards the major concepts discussed. I do plan to use some of the assessment ideas during the next idea.
* I will definitely attempt to incorporate our results of the day.
* I will use the majority of what I learned.
* Quite likely.
* We did what organelle is most important, explain. Going to use this with my students. Hopefully college teachers also use this and can hopefully compare results next year.
* Very likely; I need to improve.
* I will be using the assessment we developed in my 9th grade biology class in a few weeks. It will replace my current cladistics activity.
* Unlikely – but really got me thinking about the need for more local conversation.
* Very – inquiry is something we do more and more of now that we have a way to assess progress or how “easy” it is to do.
* Very likely. A very broad, pragmatic exercise/assessment on biodiversity/evolution was shared.
* I’m planning on using assessment ideas from today in lab this semester.

1. **Would you be willing to share your work at the 7th Life Sciences Summit?**

If yes or no, name:

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1. **Other comments:**

* Another great summit Mark! Thank you for your comment at the end when you explained the baby steps. We often forget it’s the little things that make a huge difference. The fundamentals of science and what we teach as well as why we are here! Thank you for allowing me to be part of this team.