Chat from Rural Informal STEM Conference Webinar #2
9-9-2019

Conference final report is at www.mmsa.org/RuralConference2018

Question: What state are you from and how many years have you worked in rural settings?

18:58:09   From Jason Moeller : Nashville, Tennessee here. I teach the homeschool program at the Adventure Science Center, Discovery Center in Murfreesboro
19:07:16   From Toni Dancstep : None. But I have lived in rural settings.
19:07:23   From Carol Frost : I have been teaching in Wyoming for 36 years.
19:07:40   From Jason Moeller : Been in informal for 10 years. Mostly working with homeschool students in the city proper, but have done some outreach.
19:07:50   From Jason Moeller : Zoos and Science Centers, primarily.
19:07:52   From Deborah Ivie : I work with both rural and non rural settings throughout the state of Utah for about 12 years. I am not located in a rural setting but support rural settings in stem throughout the state
19:07:52   From Sue Allen : I've been working in Maine for 8 years, mostly in after school programs
19:08:25   From Carol Frost : University of Wyoming, including outreach in the state.

Question: How do you define 'rural'?

19:09:45   From Jason Moeller: Low population density in an area
19:09:56   From Carol Frost : Rural is the non-urban setting, so small towns and outlying areas. In Wyoming we have only 1 city with more than 50,000 people so rural is almost everywhere!
19:10:05   From Deborah Ivie : Utah has a centralized population that covers about 4 counties, For us "rural" is the area outside of that.
19:10:21   From Sue Allen: Low density, and lack of access to big informal STEM institutions and big STEM industries
19:10:42   From Toni Dancstep : Small population, fewer/less access to jobs, goods, and tech
19:10:51   From Deborah Ivie: I would agree with sue that we have the same problems in our rural areas. Lack of STEM support
19:18:47   From Carol Frost: I can't say I've thought much about the exact definition of rural. I agree with your summary.
19:19:13   From Toni Dancstep : I‚Äôd second Carol‚Äôs note :)
19:19:16   From Jason Moeller : Primarily where I work. Science Centers/Zoos tend to be in larger metropolitan areas with a large number of individuals living in close quarters, both to each other and to the institution.
19:19:41   From Deborah Ivie : There are several grants available through legislation in our state that have defined "rural" for us, so Utah seems to have its own definition
19:20:11   From Jason Moeller : For us, rural often means distance - it's often viewed as an outreach opportunity, unless you can find ways to bring the rural community to you.

Question: In what ways have you had success in building community?

19:25:58   From Jason Moeller : For homeschoolers, I allow all parents to sit in on the classes. This has several benefits.

19:26:27   From Jason Moeller : First, two deep leadership. Second, I can model how to teach a science lesson. Third, classroom management is much easier.

19:26:41   From Carol Frost : I have participated in Leadership Wyoming for 20 years, so have developed a network of most of the leaders across the state to engage in geoheritage. I have some other ideas but am trying to figure out how to fund them!

19:27:38   From Deborah Ivie : We have established a STEM working group that allows rural communities to come together to discuss ideas and needs, and to help each other out with expertise

19:27:44   From Deborah Ivie : online

19:27:52   From Jason Moeller : Finally, allowing parents in allows them to see what I am doing. Word of mouth is extremely valuable here - especially to reach the families living in rural areas.

19:29:01   From Toni Dancstep : This is not in rural locations, but in the city we've gone to the location where people work/school early and often; given a clear vision of what we're looking to create together and how long we'll be working together so we are all on the same page; found connections to share with families; and brought people and their families and friends to the museum for a pizza party and free hang/exploration opportunities.

19:29:16   From Jason Moeller : Since we only see them once a week with our class, they can see some of the techniques. I try to teach the parents how to teach science as well.

19:30:14   From Jason Moeller : Our other big thing is email - a lot of parents do have a computer, so if you can get an email list together, you can communicate to a lot of people quickly. This is how I get class information to my parents.

Question: How have you tried to reach all youth, especially those who might be marginalized by multiple identities?

19:41:35   From Carol Frost : I am interested in adult informal STEM learning but the problem is the same. Those who are better educated are more likely to express interest in participating.

19:42:04   From Deborah Ivie : Many kids "self select" out of stem at young ages because they feel it doesn't fit with their culture, gender etc. One thing we do is try to find ways to start young, before this occurs.   Secondly, we work to embed STEM into things that might pull the interest of those who are marginalized.

19:42:30   From Toni Dancstep : I think one of the most important aspects of reaching out is making sure the program and its components are accessible to all (so multi-lingual, multi-modal), and making sure the offering matches the invite.

19:42:31   From Jason Moeller : This is more of a Science Center mission task than an individual one. On our team, we have different individuals with different roles, and each role tries to target a different element. For example, I work and focus with

homeschooled students. One of my colleagues runs experiences for girls. Still another has trained as an ESL specialist. We attack this as a team and not an individual.

19:45:03   From Deborah Ivie : We do "quilting geometry" . We get kids we would never get with robots. :)

Question: What are other creative measures of impact that might be especially appropriate in rural places?

19:52:19   From Carol Frost : I can't come up with much! I do think that co-design is a good approach but I don't know how that can be used for assessment and outcomes.

19:52:32   From Deborah Ivie : As I said before, we embed STEM into things that aren't considered STEM. We also work really hard to develop a "near-peer" mentoring system, where STEM is being presented by someone "like them", especially with youth. This also helps us to get stem into areas where adults are uncomfortable with STEM concepts. Youth are used to not knowing everything. :)   When we use them as leaders we are often able to get more stem into resistant communities.

19:52:55   From Jason Moeller : I don't know how creative this is, but we are starting this year to run a science fair, to be held at the science center, for all homeschooling families. It's free, but we will get to observe and judge the projects. This will give us a good feel for what the kids are actually learning in our program, and what kids not in our program are actually interested in so that we can improve ours.

19:53:04   From Jason Moeller : Kids can pick their own topic.

19:53:09   From Deborah Ivie : we also are then able to measure impacts on two levels

19:53:15   From Toni Dancstep : We've been working in the Tenderloin in San Francisco, where the community is tightly knit and vibrant, but also it is the area with the most people experiencing drug addiction or homelessness. We've began working with community members to help us develop interview questions and also participate as researchers on the team (conducting interviews and making adjustment recommendations). We spent 3-4 weeks getting to know each other's approaches, values, methods, and concerns.

19:53:36   From Tom Keller : I wonder if NSF or funders would accept increased awareness of policy makers - do legislators know about your project/do they offer additional funding or other support - could that be a measure?

19:57:42   From Jason Moeller : We run those at the Science Center too. We call them STEM Events. We bring 10 hands on stations to a community center, and allow students to wander and do the stations at their leisure.

19:58:42   From Tom Keller : Jason - cool stuff for sure!!

20:00:15   From Jason Moeller : Just wanted to say thanks, I appreciate you holding this!

20:00:28   From Carol Frost : Thank you very much for hosting the webinar!

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