



Video

FULL DETAILS AND TRANSCRIPT

Female Role Models in Junior High

Clarke N. Johnsen Junior High School, Utah • October 2007

Topic: Encouraging Girls in Math and Science

Practice: Female Role Models

Highlights

- Using funding to support activities to interest girls and minorities in math, science, and engineering, teachers at Clarke N. Johnsen Junior High school can implement activities they don't get to do during the regular classes.
- Every Monday, AP students from the district's high school provide one-to-one mentoring and tutoring to students in grades 7 and 8.
- College students and women who have careers related to math and science come to school to mentor girls, talk about their careers, and tell them that girls can become anything they want to be.
- Girls attend conferences and workshops hosted by the local university to listen to female role models and learn about the types of math- and science-related careers they could aspire for.
- An important message to students is: "if you have a dream then you can obtain anything."

About the Site

Clarke N. Johnsen Junior High School
Tooele, UT

Demographics

83% Caucasian, 12% Hispanic, 2% African American, 1% Asian, 2% American Indian
35% free and reduced price lunch
51% female students

In Clarke N. Johnsen Junior High School teachers and school administrators collaborate to encourage girls in science. The approach taken by the school includes:

- Teachers serve as role models and deliberately discuss their own education, experiences, and interests as scientists
- Female scientists invited as speakers and to model science activities
- Active recruitment of girls to participate in regional events promoting women in science
- Innovative lesson plans that draw on girls' experiences and interests, and involve all students using techniques such as group projects and open-ended exploration
- Science teachers work with students to develop career interests that are not gender biased

Full Transcript

MESA stands for Math Engineering Science Achievement. It's a national program, but there are only about ten states right now involved. We get legislative money. Money from the legislature provides us money for each school and they apply for a grant to help girls and minorities—let them know that math and science and engineering can be actually fun things. It can be very enlightening for them to help them out, to try to get them involved in these careers.

A lot of these things I don't get to do in my class time because I have so many things I have to cover. So this is the time to have the fun things to build, to put together things, have a better rapport with the students. We always like to do an end of the year field trip, and it's just fun for the students.

Every Monday we have a program in our school—it's tutoring. We have free tutoring, and it's open to anybody—girls or boys, or anybody. And we have A.P. students from the Tooele High come down and mentor them, tutor them, let them help with any subject that they are having any problem with. And it's a one-on-one program for them, so that it's not a teacher. It's an older student, and they can see, "Oh, they accomplished this. I can accomplish this. They got through it, so can I get through it. And they are doing a lot harder work than I am now, so I can obtain that level, also."

Some of the programs that extend beyond MESA here at our school are—is the Step Program, and that’s the college level MESA program, that they can become involved in. They have volunteers that come down to the public schools—to the junior highs and high schools that help mentor the girls and minorities in those programs. I bring in mentors; I even bring in my mentor from school. She’s older now, but she really has a fun time enjoying talking to the students. But I think it’s really important, because she wanted to be a nuclear physicist, and she was told that she couldn’t because she was a woman. And so that’s very important for the girls to hear that—that we’ve come a real long way, that they can become anything they want to.

When I bring in role models, I think of, “Do they have a rapport with the students?” I mean, you can be a woman engineer, but that doesn’t necessarily mean that you feel comfortable around the students or will be able to answer their questions on their level. I have brought in women engineers from ATK and Thiokol, and so forth. And some have worked very well, and others you can tell they are a little nervous. If you work through their Human Resources department, I think they’ll be able to send the right one that will do a good job for you.

For the speakers that speak in my class, I like them to give their background example, what sparked them to go into this career, and then how it was for them in college, what kind of classes they took, if they had scholarships, if they worked hard, if they obtained scholarships or not, and then what the ratio for the men and the women in the classes. I like them—and then usually we have an open-ended question period for the students to ask questions to the people. And usually it’s really interesting that all of them had some type of mentor or some type of role model that sparked their interest and why they chose that career in the first place.

We’ve had astronomers—women astronomers—come in, and they’ve really enjoyed those. One was a F.B.I. scientist, and she does the C.S.I. part of it, and it was really interesting because she was comparing how she does it and then how the movie is. She says there is no way that they have things the next day ready, that they can process the DNA and the fingerprints and everything so fast. When you see it on their computer program going through to match the fingerprint or the faceprint, there is no way they can do it in the time frame that they have on TV. So, that was a real eye-opener to the girls. On the way home, they all wanted to be that person. They wanted to work for the F.B.I.; they wanted to work in the C.S.I.; they wanted to process the DNA; they wanted to process the fingerprints. They thought that was a really fun job.

We take girls to a program called Expanding New Horizons down at UVSC—it’s a college in Provo. There’s thousands of girls there from all over the state, and all they have is women role models. They can choose from thousands of workshops they can go to that day with these women role models, and just have a wonderful time and a great time. And they can see what’s out there, what they can go in to, what jobs they can obtain. Even if they want to get a college degree, and then stay home and be a mom, that option is up to them also.

With our science department, we are all women. I was a geology minor, and we went on a lot of field trips. I know that Mrs. Clegg-Patch is a biology major, and she had a lot of fun field trips, and she enjoyed the animals and so forth. We really make science fun, so it's not something boring—reading out of the book, you know, write down the definitions. It's a really hands-on thing, inquiry thing. So they are like, "Oh my gosh, I didn't know science was so fun." Then, hopefully get them interested so that when they are in high school, they'll take more honors classes and A.P. classes, and get involved that way. Even if they don't go to a certain college, at least they know they had fun. We let them know that there is nothing you can't obtain. If you have a dream that you can do anything.