DOINGWHATWORKS

Video
FULL DETAILS AND TRANSCRIPT

Careers in Science

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

Topic: Encouraging Girls in Math and Science
Practice: Sparking Curiosity

Highlights

- Attending an engineering fair led to an assignment to create a brochure about the education needed for a specific career in math, science, or engineering.
- The assignment motivated the girls to pick a future career and apply themselves to the schooling necessary, regardless of the obstacles they would face.
- The teacher emphasized that the students could become any of the things they had based their brochures on. It would just take effort on their part—the choice was up to them.

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

Teacher:

My girls came back from the Engineering Fair really excited about what they saw and learned there. And so I decided to give an assignment that they needed to pick a career in either math, science or engineering and create a brochure that told the reader exactly what they had to do to become an engineer or a dentist or a geologist or different types of careers. And then they had to present that in a brochure type and they just went with that. They just loved that.

It was almost like unleashing something in side them that they were like, "Yeah, I can do that. And it doesn't matter how much schooling it takes, that it's going to be worth it to me in the long run to go for that."

Teacher Speaking to the Class:

Okay, so you've gotten your page separated into three categories where you're going to put the presenter's name, the career that they chose, and something that grabs your eye as to something that intrigues you about the career of their choice. And that way we'll be able to learn more about the career, and they may be able to give you some questions that you want to ask them about that—the career that they chose.

Student:

I did a robotic engineer, and I chose this because robots have always interested me. I've always wanted to learn how they're built. And we went to the Engineering Fair I thought the little blue ones were really cool. If you want to be a robotic engineer, you need to have a bachelor's in math and science.

Student:

What would you want to make them for if you did?

Student:

Well, when I was like 5, I promised my little sister I would make a robot so she didn't have to clean her room. So I'd like to make a personal robot that you can use for everyday things.

Student:

Do you know anybody that's a robotic engineer?

Student:

No, but I would like to know somebody, so I can learn from their experiences.

Student:

And she said, "Once when I was at a geological conference where I met some of my European colleagues for the first time. They were surprised to learn that I was a woman. I'd always published using my first initials only, so they had no idea even though we'd known each other for years of work." These are the things she believes that you need to be a good geologist: In education, you need a bachelor's of arts in geology, Ph.D. in geology. She says, "I use a lot of math to develop statistics about the data I gathered. I have to know which formula to use to get the right information."

Student:

Why did you choose a geologist for your career brochure?

Student:

Most of my family are in either medical or education jobs, and I thought, "Well, why don't I try something different" and I got really interested in this.

Student:

I want to be an endocrinologist, and endocrinologists are diabetic doctors.

Student:

I think it would be cool to be a volcanologist because you get to explore volcanoes and everything.

Student:

I did this brochure because one of my uncles is an aerospace engineer, and I think that it would be kind of fun.

Teacher:

What I want you to know is that you guys can become anything that you want to become. You can become these careers that you chose, and it just takes the effort on your part to get there. You can go to any school you want to go to, you can become anything you want and the choice is up to you. Right? Yes or no?

Students:

Yes.

Teacher:

Yes.