NSDL/NSTA Web Seminar:
FunWorks: Inspiring Students to Pursue Math and Science Careers!

Thursday, September 20, 2007
Today’s NSDL Expert:

Sarita Nair-Pillai
Project Director
EDC, Inc

http://nsdl.org
Who we are

- **Education Development Center, Inc.**
  An international non-profit organization that conducts research and creates programs to advance learning

- **Gender, Diversities & Technology Institute**
  A group within EDC developing technology-based projects that leverage the power of diversity to improve education and work

http://nsdl.org
Did you know....

Over 80% of the fastest growing occupations in the U.S., and two-thirds of the occupations with the largest growth, are dependent upon a knowledge base in science and mathematics.

Coble and Allen (2005), Keeping America Competitive. Denver, CO: ECS, p. 2

More than 50% of the current science and engineering workforce is approaching retirement.

Stereotypes about gender appropriate occupations are formed before students start middle school

<table>
<thead>
<tr>
<th>Agree</th>
<th>Disagree</th>
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Stamp your answer
More research on career development

- Students at risk, girls, and youth of color often limit their career choices early
- Few middle-schoolers have realistic career plans or an awareness of the world of work
- Self-efficacy: students’ career goals are based on what they believe they are capable of doing
Our research - The 5 most popular jobs cited by middle school students (Rate from 1 – 5, with 1 being most popular)

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<thead>
<tr>
<th>Hair Stylist</th>
<th>Doctor</th>
<th>Teacher</th>
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<tbody>
<tr>
<td>Basketball player</td>
<td>Lawyer</td>
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Popular Job Categories

- Entertainment: 28.4%
- Professional Sports: 23.9%
- Science, Eng, Computers: 21.8%
- Trades: 21.0%
- Medicine: 18.5%
- I Don't Know: 16.0%
- Law: 14.4%
- Art & Design: 11.5%
- Teaching: 11.1%
- Business: 7.4%
- Veterinary Medicine: 6.6%
- Law Enforcement: 6.2%
- Specific Company: 4.9%
- Childcare: 3.3%
- Writing: 2.9%
- Armed Forces: 2.5%

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In our survey, what did most middle school students state were the most important aspects of a job to them? (e.g., money, hours, etc.)

Write your answers on the chat.

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Most important aspects of a job...

- Liking the work I do (72%)
- The money I make (61%)
- Helping other people (40%)
- Making my family proud (39%)
- Liking the people I work with (35%)
- Being my own boss (12%)
- Where I work (office, outside) (11%)
- Choosing my own work hours (7%)

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Welcome

This Web site is about careers. Not just the interesting ones other people have, but the ones YOU can have. Don't know where to start? Well, dive right in and:

- EXPLORE many different areas, not just the ones that seem obvious
- THINK about what you enjoy. See where it leads you.
- EXPERIENCE lots of ideas

You may not know exactly what you want to do as an adult, but this site will help you start. Discover who you are, what you like to do and what you do best.

Not sure what to click on? Try taking this quiz to help you figure out what to do next!

Click here if you're interested in any careers having to do with Math or Science.

http://thefunworks.org
Why this project?

• Importance of STEM careers
• Formative middle-grades age range
• Lack of comprehensive, contextualized resources for youth
• Connection between academics and the ‘real world’
Building the FunWorks

http://nsdl.org
Inspire youth to explore STEM careers they might never have considered

With my interest in art and design, what kind of job could I do?

Here are just a few ideas:

- Animator
- Urban Planner
- Fashion Designer
- Industrial Designer
- Art Conservator
- Scientific Illustrator
- Set Designer
- Cosmetics Chemist

Keyword search

Updated: December 1, 2006
Debunk myths about what it takes to succeed in STEM careers

Oksana Wall-Project engineer in Disney's Ride & Show Engineering Group

Sheri Garner Ray-Video game designer

http://nsdl.org
Encourage youth to understand the relevance of STEM in real world contexts

Stamp the knee that requires surgery
Emphasize 21st century skills such as teamwork, leadership, and critical thinking.
Expose youth to the academic preparation required for math and science careers.
In my classroom, I teach……

a) A unit on careers that includes STEM careers

b) A unit with a focus on STEM careers

c) A more in-depth exploration of STEM careers (internships, job shadowing, field trips)

d) Without any units covering STEM careers
In their own words...

“I’m now interested in Nanotechnology because I like robots, and making small robots would be even cooler.”
“My number one career choice is genetic engineer…I am very interested in genetics, and I want to help cure genetic diseases.”
In their own words…

“I learned about different careers and how to prepare for them and which ones were best for me…I liked Industrial Design and Fashion Design.”
"I used to think that careers were boring, not like basketball. But some of them are cool, like engineering. You get to work with cool things."

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Sarita Nair-Pillai  
spillai@edc.edu  
http://thefunworks.org

Robert Payo  
rpayo@nsdl.ucar.edu  
http://nsdl.org

THANK YOU!
Go to http://nsdl.org and click on the K-12 audience page to:

- Download our Seminar Resource List
- Utilize our blog featuring our presenters for the Fall Series sharing their insights on careers in science and science education:
  
  http://expertvoices.nsdl.org/2007fall-nsta-sems/
National Science Teachers Association
Gerry Wheeler, Executive Director
Frank Owens, Associate Executive Director
Conferences and Programs
Al Byers, Assistant Executive Director e-Learning

NSTA Web Seminars
Flavio Mendez, Director
Jeff Layman, Technical Coordinator