NSDL/NSTA Web Seminar:

FunWorks: Inspiring Students to Pursue Math and Science Careers!

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

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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>
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<tr>
<th>Agree</th>
<th>Disagree</th>
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Stamp your answer

http://nsdl.org
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

http://nsdl.org
Our research - The 5 most popular jobs cited by middle school students (Rate from 1 – 5, with 1 being most popular)

<table>
<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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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
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%)
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
Inspire youth to explore STEM careers they might never have considered

The FUN WORKS

...for Careers You Never Know Existed.

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 Conservation
- Scientific Illustrator
- Set Designer
- Cosmetics Chemist

Look it up!

"Don't know a word on this page? Look it up here."
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
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.”
In their own words…

“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."
THANK YOU!

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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/
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