

The National ATE Center for Nanotechnology Applications and Career Knowledge (NACK) Webinar Handout  
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## Nanotechnology and Materials: Nanotechnology Impact on Materials Properties and Performance

### PRESENTERS:

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### Webinar Key Objectives:

1. What is Materials Science and Engineering?
  - Engineering versus Science
  - Example – Turkey Timer
2. Impact now and in the Future
  - Interest in Nanotechnology
  - Products
  - Research

### Video Resources:

“Imagine Our World!” Produced by Penn State Materials Science and Engineering:

[http://www.youtube.com/watch?v=IT4oDFzIPW4&feature=player\\_embedded](http://www.youtube.com/watch?v=IT4oDFzIPW4&feature=player_embedded)

- 8:40 video where you'll learn more about materials science at Penn State and how it enables advancements in fields such as health care, biomaterials, energy, and environmental protection.

### Additional Web Resources:

Centers for Disease Control and Prevention - “Approaches to Safe Nanotechnology: Managing the Health and Safety Concerns Associated with Engineered Nanomaterials”:

<http://www.cdc.gov/niosh/docs/2009-125/>

The University of Wisconsin-Madison Materials Research Science and Engineering Center (UW MRSEC) Interdisciplinary Education Group:

<http://mrsec.wisc.edu/Edetc/>

Sandia National Laboratories – two great websites that continually add new information:

<http://www.sandia.gov/NINE/about.html> and <http://www.sandia.gov/pcnsc/research/nano.html>

MatEd – a clearinghouse of teaching materials including labs, hands-on demonstrations, modules and papers, which can easily be integrated into a variety of courses, class-room settings, and industry:

<http://www.materialseducation.org/>