

Student Worksheet or Guide

Using Media to Explore Social and Ethical Issues in Nanoscience and Nanotechnology

Introduction

You will have a short PowerPoint presentation about nanoscale science and technology which examines its potential highlights and problems. Your teacher will discuss with you what nanotechnology is, why it is important to know about it, and why there are social and ethical issues associated with the technology.

Discussion Questions

1. Are any of the technologies shown/described/discussed in the movie/book/article currently available or do you think they will be available during your lifetime?
2. What, if any, social and ethical issues related to science and technology are raised in the movie/book/article?
3. Even though the portrayal is fictional, can the social and ethical issues portrayed apply to real life? If so, how?
4. Do you think scientists have a responsibility to consider social and ethical issues in their research?
5. If not, whose responsibility is it to consider social and ethical issues related to science and technology?
6. Do you think science and technology favor a particular value system, cultural view, or ideological stance?
7. What are some socially-accepted assumptions about science and technology? (e.g., scientific and technological advancement is always positive.)
8. What, if anything, can be gained by questioning these assumptions?

Add your own questions here:

Useful web sites for more information about social and ethical issues (SEI) related to nanotechnologies:

<http://www.sei.nnin.org>

This site has information and resources on SEI for students and teachers. It is part of the National Nanotechnology Infrastructure Network.

<http://www.nano.gov>

This site gives information on the National Nanotechnology Initiative. There is a section for K-12 students and teacher resources.

<http://cns.asu.edu/>

Center for Nanotechnology in Society at Arizona State University

<http://www.cns.ucsb.edu>

Center for Nanotechnology in Society at University of California Santa Barbara

<http://www.nano-and-society.org>

Illinois Institute of Technology's Center on Nanotechnology & Society—site lists articles about nano in the news.

<http://nsts.nano.sc.edu/>

University of South Carolina: NanoScience and Technology Studies – Societal and Ethical Implications

<http://www.icta.org>

The International Center for Technology Assessment (CTA) website discusses many social and ethical issues related to emerging technologies.

http://topics.cnn.com/topics/science_and_technology

CNN online provides articles in the news about nanotechnology. Under the science section do a search for nanotechnology and current articles will appear.

<http://www.nanotechproject.org/index.php?id=44>

The Project on Emerging Nanotechnologies has a variety of resources concerning the same development of nanotechnology.