

Lesson 5: Science In The Media

Case Study: Nanotechnology (B)

Lesson	Format
<p>Lesson 5 – Science In The Media Case Study: Nanotechnology (B) In this lesson students will review their work in lesson 4, and consider further examples of how nanotechnology is presented to the general public.</p>	<p>Activity 1: up to 25 minutes Groups should reconvene, discuss and formulate conclusions relating to their consideration of the news articles and tasks from lesson 4. Groups may be invited to present their conclusions to the class.</p> <p>Students may then be encouraged to decide on a personal conclusion in answer to the question “Would I use nanotechnology?” (please note there is no right or wrong answer to this question). Their answers may be presented to the class, or comprise a written activity: students should be encouraged to provide supporting arguments for their conclusion.</p>
<p>Learning objective: Assist students to critically analyse and assess scientific information in the media. Encourage students to develop skills in critical thinking.</p>	<p>Activity 2: up to 25 minutes View one or some of the YouTube Clips referred to in the resources section.</p>
<p>Curriculum points covered: This lesson links with a consideration of the treatment of science in the media, as well as encouraging the development of information literacy i.e analysing and synthesizing information relating to the sciences.</p>	<p>Invite the students to analyse the clip(s) to decide whether the information provided is balanced or if you think there is a vested interest behind opinions included in the articles. Look for facts (especially verifiable ones), opinions and quotations that indicate that the reporter is providing a balanced viewpoint or only part of the story.</p> <p>Write a report on the story detailing how you know when a story is balanced – what evidence have you found to indicate that the clip is balanced or only partially telling a bigger story.</p>
<p>Resources: Links to YouTube clips:</p> <ul style="list-style-type: none"> • <i>Nanotechnology - age of convergence:</i> http://www.youtube.com/watch?v=uf6EGvl7nJo • <i>Nanotechnology - the next BIG thing:</i> http://www.youtube.com/watch?v=gyHV_2QqPdA • <i>Be amazing!: A step-by-step guide to destroying civilization with nanotechnology:</i> http://www.youtube.com/watch?v=_0dYPnui3rM • <i>Nanotechnology nanorobots:</i> http://www.youtube.com/watch?v=h8NU5DbDDQk <p>(Full description on page 16)</p>	<p>Suggested Homework: Look in newspapers, magazines, television news reports and websites for additional articles relating to nanotechnology, and critically analyse.</p>

Suggested adaptations

Support:

Ask the scientists how they feel about their research being presented in the media.

Extension:



Teachers wishing to undertake a more detailed consideration of nanotechnology, biotechnology and other emerging technologies with their students may choose to explore the DIISRTE resource TechNyou (<http://technyou.edu.au>), which provides news and views, resources and fun tools to use in the classroom.

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Nanotechnology - age of convergence

The author/YouTube creator suggests that humanity is approaching an evolutionary event horizon, where the organic and the synthetic, the virtual and the 'real', are merging into an operational ecology. The YouTube derails this operational ecology as an existence morphology for which there is no precedent in the history of which we are currently aware, catalysed by nanotechnology.

See the following YouTube link uploaded by Charles Ostman on 21 June 2006 (timed at 4:34): Nanotechnology - age of convergence <http://www.youtube.com/watch?v=uf6EGvI7nJo>

Nanotechnology - the next BIG thing.

Mathias Kolle, a PH.D. student in Physics at Cambridge University, United Kingdom reveals how technology will help change our lives in the future. He discusses the use of microscopes and laboratory experiments, cancer, the environment, and science and technology.

Uploaded to YouTube by truetubevideos on 15 August 2008 (timed at 4:27): Nanotechnology - the next BIG thing http://www.youtube.com/watch?v=gyHV_2QqPdA

Be amazing!: A step-by-step guide to destroying civilization with nanotechnology

This YouTube clip by Ransom Riggs and friends uses 3D animation created with motion capture technology to show how to live inside a whale, fight a zombie, attempt to destroy civilization by infiltrating an advanced research facility, and use nanotechnologies as a catalyst for disasters.

See the YouTube link uploaded by ransriggs on 08 March 2009 (timed at 6:15): Be amazing! http://www.youtube.com/watch?v=_0dYPnui3rM

Nanotechnology nanorobots

Nanorobotics is the technology of creating machines or robots at or close to the microscopic scale of a nanometre (10⁻⁹ metres). The author/YouTube creator suggests that nanorobotics is a still largely hypothetical nanotechnology engineering discipline of designing and building nanorobots. He details that nanorobots (nanobots, nanoids, nanites or nanonites) would be typically devices ranging in size from 0.1-10 micrometers and constructed of nanoscale or molecular components. He says that as no artificial non-biological nanorobots have yet been created, they remain a hypothetical concept.

See the YouTube link uploaded by 4DaBigTime on 28 June 2009 (timed at 2:15): Nanotechnology nanorobots <http://www.youtube.com/watch?v=h8NU5DbDDQk>