

Science Time

Program Content for May 17, 2017

Access this week's Science Time in the recently released Newspapers in Education (NIE) 'Nanotechnology' special insert which can be found immediately after page H6 of the Sunday, May 14, 2017 edition of the Seattle Times.

Objective

- I can explain what nanotechnology is and detail the pathways available to pursue a career in this field.

Next Generation Science Standards (NGSS) connection

Connections to Engineering, Technology, and Applications of Science - *Interdependence of Science, Engineering, and Technology*

- Engineering advances have led to important discoveries in virtually every field of science, and scientific discoveries have led to the development of entire industries and engineered systems.

Pre-reading and Vocabulary: Define each term and then use it in a sentence to demonstrate your understanding.

1. matter
2. wavelength
3. hydrophobic

Comprehension Questions

Page 1 - What is Nanotechnology?

1. What do the fields of nanoscience and nanotechnology study?
2. Which sciences can nanotechnology be applied to?
3. How many nanometers wide is a piece of human hair?

Page 2 - Nanotechnology

4. Summarize how nanotechnology is used for each of the real-life examples listed.
 - a. Stained Glass
 - b. Medicine
 - c. Water Repellent

Page 3 - Careers in Nanotechnology

5. How many workers will be needed to support nanotechnology industries worldwide within 15 years?
6. What do nanotechnicians do?
7. What two types of microscopes do nanotechnicians use?

Page 4 - Nanotechnology

8. What is SHINE? What are four (4) things you could do while in high school to prepare yourself for a career in nanotechnology?

Prompts and Extensions

Science Time is posted to the Web on Wednesdays. Please share this NIE Science Time program with other teachers. To sign-up for the electronic edition for your class, please register

1. Complete the 'How Small is Small?' activity on page 1 of the 'Nanotechnology' special section.
2. Interested in learning more about nanotechnology as a possible career path? Learn more about SHINE [here](#)
3. Listen to this cancer research's [Ted Talk](#) about how she uses nanotechnology in her research or this Ted Talk about [what's next in nanotechnology](#),
4. Teachers: Sign-up to let your students remotely control some of the microscopes and equipment used for nanotechnology [here](#).

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