National Cancer Institute Provides resource information on nanotechnology in cancer treatment.

http://nano.cancer.gov/learn/understanding

National Nanotechnology Coordinated Infrastructure

A searchable database of over 75 lessons written by teachers for teachers. Includes reference sheets of information essential for students in basic science classes as well as other. *resources*. http://nnci.net

National Nanotechnology Initiative NNI is the overarching program encompassing all U.S. government nanotechnology activities. This site has a NanoHub link to a searchable data base of educational materials which provides information for K-12 students and teachers. There is also the Teaching Nano and Emerging Technologies Network for teachers as well as the U.S. Nano and Emerging Technologies Student Network. http://www.nano.gov

NBC Learn Nanotechnology Super Small Science

Six videos on nanoscale science developed in collaboration with the National Science Foundation.

https://www.nbclearn.com/nanotechnology

NiseNet Nanoscale Informal Science Network—Interesting articles, images and a catalog of activities. http://www.nisenet.org

Nova Making Stuff and Making More Stuff Series

Hour-long video series on how nanotechnology is making stuff stronger, smaller, cleaner, and smarter.

http://www.pbs.org/wgbh/nova/tech/making-stuff.html; http://www.pbs.org/wgbh/nova/tech/making-more-stuff.html

Ohio State University Center for Affordable Nanoengineering of Polymeric Biomedical Devices

Lessons provided for high school science teachers. http:// nsec.osu.edu/educationoutreach

PBS Learning Media Has 60 nanotechnology-related items in its resources. http://www.pbslearningmedia.org/search/? q=nanotechnology

Pennsylvania State University's Center for Nanoscale Science Nano activities for kids. https://www.mrsec.psu.edu/content/nano-activities-kids-0

Project on Emerging Nanotechnology at Woodrow Wilson International Center: This site contains many resources related to society and the safe development of nanotechnology.

sources related to society and the safe development of nanotechnology. The site also has a list of currently available consumer products. http://www.nanotechproject.org/

Scale of the Universe Interactive size and scale. http://htwins.net/scale2

ScienceCentral, Inc. Information and videos on current research, including nanotechnology. http://www.sciencentral.com

South African Agency for Science and Technology

Advancement Public engagement programs in nanotechnology and biotechnology which includes cartoon posters, lessons, and articles. http://www.npep.co.za

Try Engineering Lesson plans including ones on nanotechnology. http://www.tryengineering.org

Try Nano Resources, lessons, general information. http://www.trynano.org/

University of Illinois at Urbana-Champaign: CEMMS

Online labs that include nano-silver, gold and investigating chocolate. http://nano-cemms.illinois.edu/education

Vega Science Trust Videos on basics of nanotechnology & how it will change the world. A project lead by Nobel Prize Winner Sir Harry Kroto. http://www.vega.org.uk/video/programme/3, http://www.vega.org.uk

Wonderville.CA Variety of resources including games, videos, careers from Alberta Canada.

http://www.wonderville.org/search/nanotechnology

Nanotechnology Education Resources

10⁻⁹ meters



Nanoscale -- Too small to see!



National Nanotechnology Coordinated Infrastructure





Nanotechnology Lessons and Classroom Resources

This is a compilation of some of the resources available online for teachers. We have created this list so that teachers will be able to find lessons and support materials that will help them include nanoscale science and engineering in their classrooms. A variety of nanotechnology classroom resources are provided by the following institutions and facilities. These are provided for information purposes only and do not reflect endorsement by NNCI.



Children's On-line Science Magazine

http://www.nanooze.org FREE print copies on request

Concord Consortium Interactive simulations and lessons for biotechnology and nanotechnology. http://mw.concord.org

Cornell University

CCMR: Teacher resources & lending library of experiments http://www.ccmr.cornell.edu/education

Dragonfly TV-Nanosphere Shows on nanotechnology. With games, activities and interviews with scientists. http://pbskids.org/dragonflytv/nano/index.html

Engineering –Go for It! Lessons, activities, resources on engineering including nanotechnology. http://teachers.egfi-k12.org

European Union Nanotechnologies: A compendium for educators

http://ec.europa.eu/research/industrial_technologies/pdf/na no-hands-on-activities_en.pdf

GeckoMan An interactive game developed by Northeastern University's Center for High-rate Nanomanufacturing. http://nano.server281.com/education/k-12-teachers

Institute for Chemistry Education at
University of Wisconsin-Madison Lessons for the
K-12 science classrooms & after school groups.
http://ice.chem.wisc.edu

Hitachi, HTA Inspire STEM education and cartoon book on SEM. http://www.inspirestemeducation.us and http://www.inspirestemeducation.us/tools/science-is-fun

Nanozone: Interactive games, videos, scale, and meet a scientist—in the *Nanozone!* http://nanozone.org

KQED: Nanotechnology Educator Guide

A resource for using QUEST video, audio, blogs and maps in the classroom.

http://www.kqed.org/search/index.jsp?cx=016903106374557566950%3A07-

zut18mt4&cof=FORID%3A11&q=nanotechnology&sa=

Materials World Modules Sixteen instructional modules focused on material science and nanotechnology. http://www.materialsworldmodules.org

Molecular Expressions Exploring the World of Optics and Microscopy Includes interactive Java-powered virtual microscopes, images, and information on microscopes. http://micro.magnet.fsu.edu/index.html

Molecularium Teacher Guide & "Kid's site" about the atomic world. http://www.molecularium.com

My Scope Virtual Step by Step SEM Simulator

Developed by the Australian Microscopy and Microanalysis Research Facility and FEI. This interactive application allows you to "operate" and SEM.

http://myscopeoutreach.org/virtualSEM.html

Nano4Me Provided by Penn State's NACK Network - it offers K-16 resources (including online course materials for community colleges), remote access to equipment, and career information for students. http://nano4me.org

NanoDictionary Dictionary of nanoterms including some visuals. http://nanodic.com

NanoHub Purdue University online materials for middle school, high school, and college levels. http://nanohub.org

Nano-Link Provides high school and community college nanoscience curriculum modules. http://nano-link.org

NanoLeap Two units, one physical science and one chemistry that promote interdisciplinary nanoscale core concepts. http://www2.mcrel.org/nanoleap

NanoMission Learning Nanotechnology

through Games Games to learn basic concepts in nanoscience through real world applications from micro electronics to drug delivery. http://nanomission.org

Nanoreisen Adventures beyond the decimal

Interactive exploration of micro and nano worlds. http://www.nanoreisen.de/english/index.html

NanoSense Lesson plans and activities designed for teaching nanoscience at the high school level. http://nanosense.sri.com