



“Dig It!”

Chemists Celebrate Earth Day 2006 - eResources for K-12

Levels: (E) Elementary (K-4), (I) Intermediate (6-8), (HS) High School (9-12), (C) College, and (G) General Public.

Photosynthesis

ASU CENTER FOR THE STUDY OF EARLY EVENTS IN PHOTOSYNTHESIS – EDUCATIONAL RESOURCES (E, I, HS, C, G)

Includes information about what photosynthesis is, why photosynthesis is studied, and photosynthesis and the web. Provided by Arizona State University. URL: <http://photoscience.la.asu.edu/photosyn/education.html>

BBC – GARDENING – PHOTOSYNTHESIS (I, HS, G)

Most plants are really lucky - they don't have to go shopping for their food or spend time cooking it. They just sit waiting for sunshine and then make their food themselves. Provided by British Broadcasting Corp. URL: http://www.bbc.co.uk/gardening/gardening_with_children/didyouknow_photosynthesis.shtml

CHEMISTRY FOR BIOLOGISTS – PHOTOSYNTHESIS (HS, C)

Summarizes the stages of photosynthesis and factors affecting the rate of photosynthesis. Provided by the Royal Society of Chemistry. URL: <http://www.chemsoc.org/networks/learnnet/cfb/Photosynthesis.htm>

PLANTS: PHOTOSYNTHESIS FOR ELEMENTARY SCHOOL (E)

Focusing on photosynthesis and plant growth, there are animations that demonstrate the process of photosynthesis, and how plants grow as well as activities, games, and songs. Provided by Univ. of Missouri. URL: <http://www.emints.org/ethemes/resources/S00001575.shtml>

PHOTOSYNTHESIS (HS, C)

Multimedia photosynthesis teaching modules (text and images). Includes stages of photosynthesis. Provided by Estrella Mountain Community College, A Maricopa Community College, Tempe, Arizona. URL: <http://www.emc.maricopa.edu/faculty/farabee/BIOBK/BioBookPS.html#Links>

Nitrogen Cycle

THE NITROGEN CYCLE: NITROGEN TRANSFORMATIONS IN SOIL, WATER, AND AIR (I, HS, C, G)

Part of the nitrogen fate transformation game on the Soil Science Education web site. It contains a brief explanation, a nice image, and glossary of terms. Provided by Goddard Space Flight Center, NASA. URL: <http://soil.gsfc.nasa.gov/NFTG/nitrocyc.htm>

THE NITROGEN CYCLE: OF MICROBES AND MEN (HS, C)

This learning module from a site supported by the National Science Foundation for high school and college students provides an overview of the nitrogen cycle and the chemical changes that govern it. Provided by Vision Learning. URL: http://www.visionlearning.com/library/module_viewer.php?mid=98

NITROGEN IN THE EARTH SYSTEM (I, HS, C, G)

Nitrogen is essential to all living systems, which makes the nitrogen cycle one of Earth's most important nutrient cycles. Learn about the nitrogen cycle, human activities and the nitrogen cycle, and harmful effects of nitrogen deposition. Provided by the National Center for Atmospheric Research and the University Corporation for Atmospheric Research. URL: <http://www.ucar.edu/news/backgrounders/nitrogen.shtml>

Soil Erosion

GLOBE – TEACHER’S GUIDE – SOIL CHAPTER (E, I, HS)

GLOBE (Global Learning and Observations to Benefit the Environment) is a worldwide hands-on, primary and secondary school-based education and science program. This chapter includes a broad array of protocols and activities to help students learn about soils. URL: <http://www.globe.gov/tctg/tgchapter.jsp?sectionId=86>

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NRSC – SOILS (E, I, HS, C, G)

“Soils” is part of the National Cooperative Soil Survey, an effort of Federal and State agencies, universities, and professional societies to deliver scientifically based soil information. Has extensive set of links for teachers and students. Provided by U.S. Department of Agriculture, Natural Resources Conservation Service. URL:

<http://soils.usda.gov/>

S.K. WORM TEACHES SOILS (E)

It's a dirty job but someone has to do it — S.K.Worm answers students' questions about soil. Even their teachers can't wiggle their way out of this one! Slither your way through these soil questions and earn a special diploma.

URL: <http://www.nrcs.usda.gov/feature/education/squirm/skworm.html>

SMITHSONIAN SOILS EXHIBIT (G)

The Soil Science Society of America is working with the Smithsonian Institution's National Museum of Natural History in Washington, DC, to plan a soils exhibit as part of their Forces of Change Program. The exhibit will include a display of state soil monoliths and an educational, interactive section to help the museum's visitors understand how soil is intricately linked to the health of humanity, the environment and the planet. Provided by Smithsonian Institution. URL: <http://www.soils.org/smithsonian/learn.html>

SOIL SCIENCE EDUCATION PAGE (E, I, HS, C, G)

This site answers many of the frequently asked questions about soil. It includes tutorials, soil experiment demonstrations, and ideas for science fair projects. Provided by Goddard Space Flight Center, National Atmospheric Space Administration. URL: <http://soil.gsfc.nasa.gov/index.html>

TEACHING GEOSCIENCE WITH VISUALIZATIONS: USING IMAGES, ANIMATIONS, AND MODELS EFFECTIVELY – SOIL EROSION (C, G)

Provides a collection of audio, visual, and informational resources about soil erosion. It includes information about the Dust Bowl during the 1930s plus links to galleries of soil erosion images. Provided by Carleton College and Central Michigan Univ. URL: http://serc.carleton.edu/NAGTWorkshops/visualization/collections/soil_erosion.html

VISIBLE EARTH (NASA) – LAND SURFACE (G)

This website contains a searchable directory of images, visualizations, and animations of the Earth. This section contains images pertaining to surface processes, including erosion, sedimentation, land temperature, land use, soils, and topography. Provided by: NASA. URL: http://visibleearth.nasa.gov/view_set.php?categoryID=720

Organic Farming

ALL ORGANIC LINKS (G)

AllOrganicLinks.com is a not-for-profit web site created by Foerstel Design, a graphic design firm committed to the organic industry and its community. The sole purpose of AllOrganicLinks.com is to connect users with businesses that support organics and a healthier planet. URL: <http://www.allorganiclinks.com/>

BBC – GARDENING – ORGANIC GARDENING (G)

Organic gardens can be attractive and productive - and it's simpler than you think. Follow our guides to creating and maintaining an organic garden. Provided by the British Broadcasting Corporation.

URL: http://www.bbc.co.uk/gardening/basics/techniques/organic_index.shtml

THE ORGANIC CENTER (G)

To generate credible, peer reviewed scientific information and communicate the verifiable benefits of organic farming and products to society. URL: <http://www.organic-center.org/>

ORGANIC TRADE ASSOCIATION (G)

Organic Trade Association (OTA) is a membership-based business association that focuses on the organic business community in North America. OTA's mission is to promote and protect the growth of organic trade to benefit the environment, farmers, the public and the economy. URL: <http://www.ota.com/links/resources.html>