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<http://www.nsta.org/recommendedsites>.

American Chemical Society

<http://www.chemistry.org/kids>

The Chemistry of Everyday Life

<http://antoine.frostburg.edu/chem/senese/101/consumer/faq.shtml>

The Chemistry Learning Center, at the University of Illinois Urbana-Champaign *Illustrations and video of chemistry demonstrations*

<http://www.chem.uiuc.edu/clcwebsite/demos.html>

Interactive Periodic Table of the Elements

<http://www.chemicalelements.com>

**Los Alamos National Laboratory
Chemistry Division**

<http://periodic.lanl.gov/>

**Material Safety Data Sheets Online
(free registration/login is required)**

<http://www.msdsonline.com/>

The Nobel Prize, Chemistry Education site

<http://nobelprize.org/chemistry/educational/>

The Nobel Prize in Chemistry

<http://nobelprize.org/chemistry/>

RE:Source Chemistry

*An online middle school teacher resource
for background information and activities*

[http://www.chemistry.org/portal/a/c/s/1/
acdisplay.html?DOC=education%5Cwande%5
Cresourcechem.html](http://www.chemistry.org/portal/a/c/s/1/acdisplay.html?DOC=education%5Cwande%5Cresourcechem.html)

**The Royal Society of Chemistry's Visual
Elements Periodic Table**

[http://www.chemsoc.org/viselements/pages/
pertable_j.htm](http://www.chemsoc.org/viselements/pages/pertable_j.htm)

**Science Trek: Learn about Atoms, Elements,
the Periodic Table, Isotopes & Radioactivity**

[http://www.colorado.edu/UCB/Academic
Affairs/ArtsSciences/physics/PhysicsInitiative/
Physics2000/index.pl](http://www.colorado.edu/UCB/AcademicAffairs/ArtsSciences/physics/PhysicsInitiative/Physics2000/index.pl)

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Melvin Berger. Chelsea House Pub., 1998.

Look Closer: Rain Forest

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Meat-Eating Plants (Weird and Wacky Science)

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Plants of the Forest (The Amazing World of Plants)

Andreu Llamas. Chelsea House Pub., 1995.

Poisons in Our Path: Plants that Harm and Heal

Anne Dowden. HarperCollins Children's Books, 1994.

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Eyewitness: Electricity

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Steve Parker. Southwater Publishing, 2002.

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<http://www.nsta.org/recommendedsites>.

How Compasses Work

<http://www.howstuffworks.com/compass.htm>

How Things Work: Maglev Trains

<http://howthingswork.virginia.edu/>

The Institute of Electrical and Electronics Engineers Virtual Museum

<http://www.ieee-virtual-museum.org/index.php>

National Aeronautics and Space Administration Earth's Magnetic Field

<http://science.nasa.gov/ssl/pad/sppb/edu/magnetosphere/bullets.html>

NASA's Goddard Space Flight Center The Exploration of the Earth's Magnetosphere (with Spanish translations)

<http://pwg.gsfc.nasa.gov/Education/Intro.html>

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<http://www.rigb.org/heritage/faradaypage.html>

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Boston Museum of Science

<http://mos.org/sln/Leonardo/InventorsToolbox.html>

The Franklin Institute Online: Simple Machines

<http://sln.fi.edu/qa97/spotlight3/spotlight3.html>

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American Association of Physics Teachers

<http://www.aapt.org/index.cfm>

American Institute of Physics, Center for History of Physics

<http://www.aip.org/history/>

American Physical Society

<http://www.physicscentral.com/>

Fear of Physics. Physics. Explained. Finally.

<http://fearofphysics.com>

How Things Work: Explaining the Physics of Everyday Life

<http://howthingswork.virginia.edu/>

The Nobel Prize in Physics

<http://nobelprize.org/physics/>

The Nobel Prize, Physics Education site

<http://nobelprize.org/physics/educational/>

North Carolina State University Physics Demonstrations Room

<http://demoroom.physics.ncsu.edu/>

Physical Sciences Resource Center for Teachers

<http://psrc.aapt.org/>

Physics 2000: An interactive journey through modern physics

<http://www.colorado.edu/physics/2000/index.pl>

The World Year of Physics 2005: A worldwide celebration of physics and its importance in our everyday lives

(The year 2005 marked the hundredth anniversary of Albert Einstein’s “miraculous year” in which he published three important papers describing ideas that have since influenced all of modern physics.)

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<http://aa.usno.navy.mil>

Earth and Moon Viewer

<http://www.fourmilab.ch/earthview/vplanet.html>

Goddard Space Flight Center: Earth and Moon Fact Sheets

<http://nssdc.gsfc.nasa.gov/planetary/factsheet/earthfact.html>

<http://nssdc.gsfc.nasa.gov/planetary/factsheet/moonfact.html>

Goddard Space Flight Center: The Sun-Earth Connection

<http://sec.gsfc.nasa.gov/>

International Space Station

http://www.nasa.gov/mission_pages/station/main/index.html

ISS EarthKAM

<http://www.earthkam.ucsd.edu/>

National Space Science Data Center Photo Gallery

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The Solar and Heliospheric Observatory (SOHO): Exploring the Sun

<http://sohowww.nascom.nasa.gov/>

Solar System Exploration

<http://solarsystem.nasa.gov/index.cfm>

U.S. Geological Survey, Education Page

<http://www.usgs.gov/education/>

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The International Dark Sky Association

<http://www.darksky.org/>

Environmental Protection Agency Educational Resources

<http://www.epa.gov/epahome/educational.htm>

Environmental Protection Agency Recycle City

<http://www.epa.gov/recyclecity/>

Science Safety

Classroom safety is always an important consideration for teachers and students. Throughout the **Broward County Hands-On Science** program, every effort has been made to choose safe materials and to suggest safe activity procedures. Special **Safety Note** boxes in the teacher's guide highlight specific safety information.

The Science Safety Rules on the following page provide general safety information for students. You may wish to photocopy the rules and distribute them to the class as the basis for a safety contract. Discuss the rules, answer questions, and set up additional guidelines students suggest. Post a copy of the rules in the classroom. (A **Science Safety Rules poster** is included in this DSM₃ kit.) Review specific safety rules as appropriate prior to each activity.

To provide a safe environment for students engaged in science activities, consider these additional suggestions:

- At the beginning of the year, and periodically afterward, discuss safety rules, demonstrate emergency procedures, and show students how to use the safety equipment in the classroom.
- Familiarize yourself with the materials, equipment, and any potential safety concerns of each activity in advance. Discuss specific safety precautions with students before beginning the activity.
- For your students' protection, always check the school files for any student allergies, such as foods, latex, strong scents, and so on.
- Set a good example yourself by following the safety guidelines when doing demonstrations, specifically identifying the precautions you are taking and why.
- Take care when arranging the classroom for science activities and storage of science supplies. Allowing students enough space and time to complete an activity is vital to student safety.
- Understand your school's policies and procedures for handling emergencies and evacuations, know the location and use of safety equipment such as fire extinguishers, and be sure that phone numbers for emergency assistance are readily available.

You may wish to consult additional classroom safety resources such as *Safety in the Middle School Science Classroom* and *Inquiring Safely: A Guide for Middle School Teachers*, both published by the National Science Teachers Association. NSTA also recommends *Chemical Safety for Teachers and Their Supervisors (Grades 7–12)*, published by the American Chemical Society, for all lab science teachers.

Science Safety Rules Copymaster on following page➔

Science Safety Rules

- 1. Listen carefully to your teacher's instructions. Follow all directions. If you don't understand what to do, ask questions.**
- 2. Approach science investigation seriously. Use the materials provided for an activity only as instructed.**
- 3. Tell your teacher if you have any allergies.**
- 4. Never taste, touch, or smell an unknown substance unless your teacher tells you to and shows you how.**
- 5. Avoid touching your eyes, face, mouth, ears, or nose while doing an activity.**
- 6. Do not bring food or drink into the work area during science activities.**
- 7. Wash your hands thoroughly with soap and water after every activity.**
- 8. Always wear safety goggles or other protective gear, such as gloves and laboratory aprons, when necessary.**
- 9. Tie back long hair and secure loose clothing when working with chemicals, hot plates, or open flames.**
- 10. Immediately report any spill, accident, injury, or equipment not working properly to your teacher.**
- 11. Treat animals in the science classroom with caution and consideration, and handle plants with care.**
- 12. Listen to and follow your teacher's instructions for cleaning up after an activity.**