

July 2008  
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## NDALL Nominations

The NDALL Awards Committee is seeking nominations for:

- 1) Educator of the Year
- 2) Student of the Year
- 3) Newcomer of the Year

For more information or to request a copy of the nominating form please contact Margaret Olheiser at: [margaret.olheiser@dickinson.k12.nd.us](mailto:margaret.olheiser@dickinson.k12.nd.us)

### MVAEA

Deb Sisco has been our state representative to the Missouri Valley Adult Education Association. Deb is retiring from that position. Thank you, Deb, for being the MVAEA Representative for NDALL for the last several years.

Tom Hall, a professor from NDSU will assume the role for the state rep to the Missouri Valley Adult Education Association. Tom can be reached at: [Thomas.e.hall@ndsu.edu](mailto:Thomas.e.hall@ndsu.edu). Welcome Tom!!

## Heartless Plants

### Robert Krampf's Experiment of the Week

Have you ever wondered why plants need so much water? Some of the flowers in our garden drink more every day than I do. To find out why they need so much water, you will need:

- a well watered plant in a sunny area
- a gallon sized, clear, plastic bag
- a wire twist-tie or piece of string

Pick a plant that is in direct sun, as that will make things go faster. Put the bag over the end of a branch, being sure that several leaves are inside. Use the wire twist-tie to fasten the bag over the branch, sealing it as tight as you can without damaging the plant. You do not want air to be able to get in or out of the bag easily. Leave the bag there for a while. Check on it every thirty minutes.

What did you notice? Soon, the bag had lots of tiny drops of water on it. As more and more of these drops form, they will start to slide down the side of the bag, collecting other drops and forming a small puddle in the bottom of the bag. By the end of the day, you probably had quite a bit of water. Where did all that water come from?

The water is coming from the leaves of the plant, through a process called transpiration. The underside of the leaf has lots of tiny holes called stomata. These holes let the plant take in carbon dioxide and give off oxygen. They also let water get out. Some plants lose more water than others, but a good sized tree can lose over 80 gallons of water a day.

Isn't that awfully wasteful? Well, it does use a lot of water, but it serves a purpose. To understand why plants need to lose all this water, think about your body. You have a heart, which pumps blood through your circulatory system. That blood carries oxygen and nutrients to all the cells in your body. Plants don't have hearts. OK, so artichokes do, but an artichoke heart does not pump the sap through the plant. How can a tree get water to move up from the roots to the highest branches?

The answer is transpiration. As water evaporates from the leaves, it is just like sucking on a drinking straw. Lowering the pressure at the top of the tube lets air pressure push more water up from the roots. As this water moves up, it carries nutrients with it. The water evaporates, but the nutrients are left in the leaf, where they are needed. Only about 1% of the water is actually used in the process of photosynthesis. The rest of it goes out into the air.

All that water going into the air serves another purpose. It is a major part of the water cycle. Almost twice as much water enters the atmosphere through plants as evaporates from the surface of all the oceans.

If you want to take this experiment another step, try putting bags on different kinds of plants. Compare broad leafed trees with a tree that has needles, like a pine. Control the variables or differences. If one bag is in the sun and the other is in the shade, you will not know whether the difference is because of the type of plant or the amount of sun.

(You are welcome to print it in your newsletter, repost it on the Internet, etc., as long as you do not charge for access, and my name and website link (<http://www.krampf.com>) are included).

#### Reason to Get Out of the Chair

Staying on your feet revs up your metabolism and doubles your calorie burn, according to a study in *Diabetes* magazine. Sitting even for a few hours switches off the enzymes that capture fat in the bloodstream, but rising reignites them. So, surrender your seat whenever possible!



(SOURCE: *Diabetes* magazine, as reported in *Self* magazine, April 2008.)

## National Science Teachers Association

### Free for All from NSTA

NSTA offers many resources and services at no charge; some are available only to NSTA members, but many are available to all. Check out what NSTA has to offer:

- **Career Center**

Job seekers can search a database of jobs in complete confidentiality at no charge, receive career-planning advice, and read success stories. Visit <http://careers.nsta.org/> for complete details.

- **FDA/NSTA Partnership in Food Science**

Using food to bring life science, chemistry, nutrition, and biology concepts to middle level and high school students is the basis of a collaborative program between NSTA and the Food and Drug Administration (FDA). Since 1999, NSTA and FDA have used inquiry-based science to develop a supplementary curriculum called Science and Our Food Supply for middle and high school science teachers. The program provides challenging hands-on activities that link food science and food safety to students' everyday lives. To learn more about teacher opportunities made available through this FDA/NSTA partnership, visit [www.nsta.org/pd/fda.aspx](http://www.nsta.org/pd/fda.aspx).

- **NSTA Calendar**

Teachers interested in science education events and programs can visit the online NSTA Events Calendar. Opportunities can be searched for by date range, ongoing events, location, category, or grade level. Short descriptions accompany each opportunity, with links to the event or program website. To view available programs and events, visit [www.nsta.org/publications/calendar](http://www.nsta.org/publications/calendar).

- **NSTA E-Newsletters: *Science Class* and *NSTA Express***

*Science Class* is e-mailed the first Wednesday of the month; each grade-specific issue features a

theme that corresponds to the themes of NSTA's peer-reviewed journals. *NSTA Express* is sent every Monday; each issue keeps you up to date on the latest legislative, science education, and NSTA news. You already know that these e-newsletters are free, but your colleagues may not. Feel free to forward this issue to them or to send them the link to sign-up for their own copy. Visit

<http://www.nsta.org/publications/enewsletters.aspx> for more information.

- **NSTA Learning Center**

The NSTA Learning Center is a professional development website designed to help address teacher's classroom needs and busy schedules. Using this site, teachers can gain access to more than 1,200 different resources and opportunities, such as:

- Over 1,000 NSTA journal articles (230 available free of charge)—many containing high-quality lesson plans.
- More than 35 free Science Objects (one- to two-hour interactive simulation-based learning experiences).
- More than 125 e-chapters from selected books and series (40 chapters free of charge).
- Free weekly live Web Seminars where teachers can interact with experts from the scientific community.
- More than 20 SciGuides (resources to help teachers integrate the internet into the classroom).

For more information, visit

<http://learningcenter.nsta.org/>.

- **NSTA List Server**

NSTA's lists are group e-mail discussions that allow members to exchange information in a peer-to-peer forum. NSTA members who subscribe (at no extra cost) can now select from 12 topic areas: biology, chemistry, computer science, Earth science, elementary, environmental science, general science, physical science, physics, technology education, new teacher, and retired teacher. The lists remove geographical boundaries from member communication and are available to NSTA members—right now.

Colleagues on the list server can share ideas, get information, and ask questions on important issues. The list server is quick and simple to use, so you can easily stay current on trends in science education. The lists are available 24 hours a day, 7 days a week, so information from you peers is available when you need it. For more information, visit [www.nsta.org/membership/listserver.aspx](http://www.nsta.org/membership/listserver.aspx).

- **NSTA Press Books**

Did you know that you can access a chapter of many new NSTA Press books online for free? Visit <http://www.nsta.org/store>, and click on the book of your choice. Scroll down to the "Read a sample chapter" link.

- **NSTA Recommends**

Read reviews of the latest science-teaching

materials, and take the guesswork out of purchasing. NSTA's online review service, NSTA Recommends, helps you find the best supplemental books, videos, DVDs, and computer software on the market. Our reviewers evaluate each product on the basis of classroom applicability, standards connections, and overall value. Search more than 3,000 reviews by grade level, subject, or keywords at <http://www.nsta.org/recommends>.

- **NSTA Reports**

NSTA Reports, NSTA's newspaper published nine times a year as a free member service, is the Association's timely source of news and information for and about science educators of all levels. It includes national news on science education and education in general; information on teaching materials; announcements of programs for teachers; and advance notice about all NSTA programs, conferences, and publications.

- **NSTA Web Seminars**

These 90-minute, live professional development experiences allow distant participants to interact with recognized experts including NSTA Press authors and scientists, engineers, and education specialists from NASA, the National Oceanic and Atmospheric Administration (NOAA), and the National Science Digital Library (NSDL). Seminars are held from 6:30–8 p.m., EST. These online events are grant-funded, so they are offered at no cost.

However, the number of participants is limited; it is first come, first served on the day of the program. Register early to receive a username. Password and other program information will follow via e-mail. To register or view a full schedule of June seminar topics, dates, and times, visit

[http://institute.nsta.org/web\\_seminars.asp](http://institute.nsta.org/web_seminars.asp).

- **Podcast Series: Lab Out Loud and Behind the Books**

Lab Out Loud is a biweekly podcast on science teaching, science news, and anything else with "science" in it. Science teachers Brian Bartel and Dale Basler discuss science news and science education with leading scientists, researchers, science writers, and other important figures in the field. A selection of links and notes accompanies each episode, enabling the listener to dig deeper into the topics discussed. Users without MP3 players can listen to the interviews on their computers. A new episode can be heard at

<http://www.nsta.org/publications/laboutloud.aspx> every two weeks.

NSTA offers a selection of conversations with authors of NSTA Press books through its Behind the Books podcast series. In these interviews, authors share insights about their work.

Whether or not you have read the highlighted books, we think you will find these podcasts interesting, thought-provoking, and helpful! To listen to Behind the Books podcasts, go to <http://www.nsta.org/publications/press/behind>.

[aspx](#) and play or download the podcast of your choice.

- **Science Teachers' Grab Bag**

The online NSTA Science Teachers' Grab Bag lists free or inexpensive resources for teachers. From lesson plans to online activities to free videos, teachers can find an array of resources for their classrooms. These resources can be searched by keyword, cost, or type, and all are listed in the order they are posted. Short descriptions accompany each listing, with links to the event or program website. To learn more about these opportunities, check them out at <http://www.nsta.org/publications/grabbag.aspx>.

- **SciGuides**

NSTA's online resource, SciGuides, will transform the way you use the internet to plan and provide science instruction to your K–12 students. SciGuides will enable you to quickly and easily locate targeted science content information and teaching resources from NSTA-approved websites and will provide instructional tools and strategies to put them into practice. For more information and a sample SciGuide, visit <http://sciguide.nsta.org/default.aspx>.

- **SciLinks**

SciLinks® is an exciting partnership between progressive U.S. textbook publishers and NSTA. If your textbook has SciLinks, you and your students will have the best internet science sources at your fingertips:

- Websites to extend and expand your students' understanding.
- Science news to add context to their classroom learning.
- Activities to bring science alive for them.
- Experts to answer their questions and satisfy their curiosity.

SciLinks is a free service to those with SciLinks-enabled textbooks and to NSTA members. And SciLinks is easy to use—just log on to the SciLinks site and enter a SciLinks number from the margin of your textbook. You will be offered a smorgasbord of teacher-approved internet resources tied to that specific point in your book. To learn more about SciLinks, take the tour at

<http://www.scilinks.org/tour/default.asp>.

## Free for All from the U.S. Government

Various government agencies offer free programs, resources, lesson plans, and more. Here's what's new from the U.S. government:

Climate CHECK is a free, Excel-based kit that teaches high school students about the science, drivers, and impacts of climate change and provides them with knowledge, tools, and resources to increase climate-change awareness and to help them reduce greenhouse

gas emissions at their schools. Students will estimate greenhouse gas emissions using built-in calculators and school-specific "activity data" and develop and implement a mitigation action plan.

<http://www.epa.gov/climatechange/wycd/school.html>

### **New Study: Reading First is not working**

excerpt of an article by Kathleen Kennedy Manzo  
published May 7, 2008  
on [www.edweek.org](http://www.edweek.org)

The \$1 billion-a-year Reading First program has had no measurable effect on students' reading comprehension, on average, although participating schools are spending significantly more time teaching the basic skills that researchers say children need to become proficient readers, a major federal report finds.

The long-awaited interim report from the Reading First Impact Study, released last week by the institute of education sciences, says that students in schools receiving grants from the federal program have not fared any better than their counterparts in comparison schools in gaining meaning from print.

To read the entire article, go to:  
[www.dys-add.com/ReadingFirstIsNotWorking.pdf](http://www.dys-add.com/ReadingFirstIsNotWorking.pdf)

To read the Reading First Impact Study, go to:  
[www.dys-add.com/ReadingFirstImpactStudy.pdf](http://www.dys-add.com/ReadingFirstImpactStudy.pdf)

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### **Texas dyslexia law**

Texas was the first state to pass a dyslexia law.

In Texas, public schools are required to screen children for dyslexia in kindergarten, first, and second grade -- for free.

Children identified as matching the "dyslexic profile" automatically get "the package" of classroom accommodations on a 504 Plan, and get to small group Orton-Gillingham based reading instruction from the dyslexia specialist -- for free.

What Texas has really done is separate dyslexia out of the special education system because they know that it is much less expensive for schools (and much better for the children) to catch dyslexia early, and fix it early, than to wait until a child is already several years behind.

To download the Texas Dyslexia Handbook, which is published by the Texas Education Agency, which explains their law and their screening procedure, go to:  
<http://www.tea.state.tx.us/curriculum/elar/2007EnglishHandbook.pdf>

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### **Foreign Language Waiver**

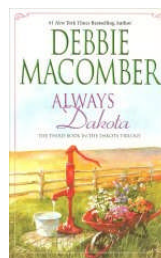
Students with dyslexia have an extraordinarily difficult time mastering a foreign language. That's why many colleges and universities are starting to accept American Sign Language as fulfillment of their foreign language requirements. In several states, ASL is mandated by law as acceptable in fulfillment of high school foreign language graduation requirements.

To learn more, visit:  
<http://web.mac.com/swilcox/UNM/ASL.html>

For a list of universities that accept American Sign Language as a foreign language, go to:  
<http://web.mac.com/swilcox/UNM/univlist.html>

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### **Author - Debbie MaComber – Dyslexic**



Debbie MaComber is a best-selling author who was not able to read until she was 11 years old. She has written over 100 books. Read her story at:

<http://www.independent.ie/health/case-studies/living-with-dyslexia-1356450.html>