Mixed Grass and Sand Dunes

Here we go again! 2004 has been littered with several articles debating the merits of Direct Instruction vs. Inquiry in publications such as Education Week, science education organization journals, the National Research Council, Centers for Science Education, and the American Psychology Association’s Monitor on Psychology. Some of the articles pose NCLB required testing for science in 2007 as the catalyst for new attention on the methods of teaching science. Three things come to my mind immediately. One is a song that you might recognize if you were born prior to 1965. “Will it Go ‘Round in Circles?” by Billy Preston. Second is a part of nutrient cycling in mixed grass prairies as herbivores leave their waste products to be further decomposed. Third is the increased focus on science education. The first two, going in circles and dung piles, are just frustration by a science teacher who has been having fun learning with students long enough to know that there is no magic bullet. Effective science teaching requires many different strategies.

Also, high stakes testing doesn’t create the teaching environments that foster life long learners. On the flip side, increasing the focus on science education via high stakes testing can translate into increased funding for areas such as professional development.

There is also a point of frustration within the science education community when it comes to documenting what works and what doesn’t. Researchers and practitioners have no consensus on the definitions of the terms used to describe science teaching such as direct instruction, inquiry, and hands-on learning. My concern is this: How can we support and defend the use of multiple teaching strategies and development of life long learning skills when teachers and administrators are pressured to follow the prevailing winds of mandates and high stakes testing? If an administrator views direct instruction as the best method for achieving the required student output for accountability, will she/he support sending teachers to our fall conference or NABT if the sessions do not address direct instruction? What can we do as a state organization?
In Schools that Learn (p.168), Robert Fritz states that the key to the creative process is structural tension. “Whenever we establish a tension, it strives for resolution…..We can move toward resolving the tension by taking actions that bring our goals and reality closer together” (Senge et al. 2000). Perhaps as an organization that is what KABT can do. Support our colleagues and administrators by recognizing the tension created by high stakes testing and use it to creatively bring “our goals and reality closer together”. One of my favorite phrases for students, my family, and myself is “you always have a choice”. We can choose to limit our reaction to complaints and leave our fellow biology teachers and their administrators on their own or we can choose to utilize the increased focus and attention on science education (i.e. structural tension) to strengthen science teaching and learning in our schools. As a state organization, we are in a position to offer support through our membership, regional representatives and board members. One of the strengths of KABT is that several of our members are involved and connected in K-16 biology/science education at the state, regional, national, and international levels.

What can KABT do for you today? We are your access to a support network that spans K-16 life science/biology education in Kansas. If you need assistance with instructional issues, biology education advocacy in your district, gaining administrative support for professional development, decisions regarding best practices, or mentoring please feel free to contact me, your regional representative, or a board member. Contact information is available at our website, www.kabt.org.

In closing, I have had conversations with teachers from all over North America regarding standards and high stakes testing. The consensus for this small sample of the biology teaching population seems to be that teaching to the test is not necessary if effective (and multiple) teaching methods are used. Use standards as a guide not the curriculum, focus on core themes that you can connect through out the year, choose your teaching strategies based on your outcomes, and use structural tension to your advantage. Keep in mind that you do have an organization that is willing to offer support.

Todd Carter
tcarter@sccc.edu


Editors note: For excellent comment on the direct instruction/inquiry issue, see the comments by NSTA president Anne Tweed in the January/February, 2005 issue of NSTA Reports, page 15.

Maybe I’m Amazed
By Sandy Collins
(This article was intended to be run last December, but , due to editorial error, was omitted)

This past week a refrain from an old Beatles song began endlessly floating through my brain: “Maybe I’m amazed”. I can’t quite shake it. More and more examples accumulate as the song resounds through my head.

Last Saturday, on what was a very cold, damp and dismal morning, a member from the Audubon Society, a KU biology graduate student, and a friend of mine met with a group of my students at the Baker Wetlands. The objective was to take some of my students on what I advertised as a Winter Bird Walk. Friday night I thought, nuts, why am I doing this? The grumbling and self-deprecation continued as I donned my heavy coat and shoes and drove out to the wetlands. Then the kids started arriving, laughing, shivering and ready for an adventure. I was amazed at how instantly happy I was. And there was more: the kids were amazed that they saw 10 different species of birds. It was a morning of amazements.

This past Wednesday, after an hour long staff meeting I was trudging back to my room along side our Band Director, Patrick, arguably the best junior high band director in Kansas, looked weary. It surprised me to hear him say that at the moment he felt less than thrilled at having to return that evening for his students’ Winter Concert. One more concert in a string of years of concerts – you can’t always be enthused can you? I knew what he meant. My agenda for the next day was to introduce my students to cell respiration. One more time to teach the same concept on the same basic level. How can you be excited? But then it happened, and the amazing thing is that it happens without fail. As the first class ended Thursday morning, I was amazed at how honestly interested I was in teaching this quite amazing process. And at the end of day I visited with Patrick – he knew exactly what I meant. We were both amazed at how this happens.

Several weeks ago on a Friday afternoon, the students in one of my classes were putting away microscopes. This group of students has consumed my time as far as examining what and how I teach. They have forced me to think of new ways to “deliver” what I think they need to know. The have forced me to rethink my classroom management skills. They have come close to depleting my physical energy. They are one bunch of troubling and troubled kids. As they were putting away the microscopes, Marc announced in his always piercingly loud voice, “Hey, we actually learned something today”. Fifteen weeks of school and I think this was an honest assessment. I should have been dismayed but I was ecstatic. I had to restrain myself from hugging him and everyone in the class. As they exited the room that Friday afternoon, I was amazed at how one fleeting moment of success can make it all worthwhile and give such joy.

It is a quiet Sunday morning at home. I have a view of a snow-covered field and woods. Maybe I am amazed at the beauty of it. Maybe I’m amazed that another year is coming to an end and maybe I’m amazed at the anticipation of a new year.

Labs, activities, letters to the editor, and student work are welcome. Send as an attachment to biologycctrack@hotmail.com.
State Science Standards Update
By Harry McDonald

As you well know, the state K-12 science standards review is still in progress. We all owe a debt of gratitude to the co-chairs Steve Case and Carol Williamson, as well as the other 15 members approving the committee draft (now known as the majority draft). In all honesty, we need to thank the 8 members of the committee who authored the minority draft for all their work  

As you know, Draft 1 from the committee was submitted to the state board in December, 2004. The first minority draft was submitted at the same time. While space does not permit an extensive discussion of the actions of the minority, suffice it to say that the SBOE majority provided unprecedented and inappropriate access and standing to the Intelligent Design Network and their director, John Calvert.

Following public comment, Draft 2 was to be sent out for external review. It was at this time that the board announced it would hold hearings on the controversy involving the differences between the majority and minority drafts.

At this time Kansas Citizens for Science called for a boycott by the entire science and science education communities. The boycott was a success as no scientists or science educators participated in the hearings except those called by the minority to explain why their religious beliefs should be introduced into the Kansas standards under the guise of science.

A coalition was formed to oppose the hearings and to provide comment on the ID testimony, including expert commentary as to why ID was, in fact, no theory at all. KABT joined that coalition.

A draft of both the boycott resolution and the coalition position paper can be found at www.ksde.org.

The hearings were held in May and the SBOE wrote its own draft of the standards in June. Interestingly this draft was neither the majority nor the minority draft. While the majority of the draft was the work of the writing committee, and the changes to that were consistent with the minority draft, Steve Abrams, author of the June draft, took it upon himself to craft his unique draft. This draft was further modified in July and eventually adopted in August to be sent to McREL for external review.

It is uncertain exactly when McREL will complete its task. At that point it is anybody’s guess as to what the SBOE will do. Possible options would be to:

1) send the recommendations from McREL back to the writing committee for consideration and development of a Draft 3. This is the most reasonable but the least expected.

2) Ignore all McREL recommendations and adopt the August draft containing the poor treatment of the nature of science and the ID-inspired “criticisms” of evolution.

3) Accept all recommendations from McREL except those critical of the ID-inspired changes to the committee’s majority draft.

Stay tuned for news.

MEMBERSHIP RENEWALS

Unless you are a life member, annual dues become due at the fall conference. Check your mailing label to see if your dues are up to date. A renewal form can be found on Page 11.

Your membership says you value this organization. Please share your opinion with a colleague and encourage them to join.

WEB OPPORTUNITIES

AAAS has a new website providing excellent resources countering the nation-wide effort to weaken or compromise the teaching of evolution in public schools.


From The Center for North American Herpetology, Lawrence, Ks

The Global Amphibian Assessment (GAA) is the first-ever comprehensive assessment of the conservation status of the world’s 5,743 know species of frogs, toads, salamanders, and caecilians. To access this information, go to www.globalamphibians.org

American Field Guide Videos

Public television stations produce many educational, informative, and entertaining science shows. Videos are available in Real Video and QuickTime formats lasting 5-10 minutes each. Public access to these is available along with scripts at: www.pbs.org/americanfieldguide/index.html# Or www.bawsca.org/hetch.html
The National Academies of Science, Engineering and Medicine are hosting a website providing easy access to books, position statements, and additional resources.

http://nationalacademies.org/evolution/

NATIONAL SCIENCE DIGITAL LIBRARY

If you didn’t see the article in NABT’s News and Views, the following is a description about a new online, science resource.

“The National Science Digital Library (NSDL) is a digital resource library for science, technology, engineering, and mathematics education at all levels. NSDL provides an organized point of access to collections and services from resource contributors including universities, museums, publishers, government agencies, and professional societies. Materials include journal articles, lesson plans, animations, real-time data sets, technology-based tools, and "ask-an-expert" services.”

The site can be found at http://nsdl.org.

From Alton Biggs and the Texas Association of Biology Teachers:

BioSciEdNet

Need a snazzy animation of gene regulation in bacteria to liven up a microbiology lecture? Looking for a lab on plant structure to replace the one you’ve used for the last 17 years? Check out the offerings at BioSciEdNet, which links to more than 1000 biological science teaching resources for high school, college, and grad school classes. The library of annotated links, sponsored by the American Association for the Advancement of Science, Science’s publisher, provides more than 150 lab exercises. Another standout is the wealth of animations, images, and videos that can help students visualize difficult concepts. Browsing or searching the listings requires free registration, as do some of the linked sites. <http://www.biosciednet.org/portal/>

Texas Instruments is maintaining a website sharing online activities created by educators, II, and leading publishers. You can download activities or post ones you wish to share.

Go to http://education.ti.com/us/activity/main.html

TI is also offering a free CD of science activities utilizing their technology. To obtain a CD, call 1-800-TICARES or visit education.ti.com/us/activitycd

In Memoriam

A message from Brad Williamson to KABT dated July 10, 2005

Charlie Drewes:

KABT Newsletter V43 N3

Sept. 11, 1946–July 4, 2005

It grieves me to inform these biology communities of the death of a dear friend and colleague–Charlie Drewes. Charlie was a very unique individual with a unique talent for creating new approaches to laboratory biology. We shared a passion for living organisms and a quest to see that living organisms should be an essential component of every biology class. Charlie’s love was invertebrates and he created an extensive set of incredibly creative resources for classroom teachers that can be found at:

http://www.eeob.iastate.edu/faculty/DrewesC/htdocs/

More about Charlie and his work is at:

http://www.las.iastate.edu/newnews/drewes0922.shtml

Charlie had a truly wacky sense of humor (some examples are here):


It was a joy to work with him. Over the last several years Charlie has conducted summer workshops for teachers at Iowa’s Lakeside Laboratory.

http://www.ag.iastate.edu/centers/lakeside/index.html.

Teachers came away from these workshops with a new appreciation for invertebrates and amazing resources to share with their students.

Of course, as you that knew Charlie know, he did all of this in his own manner and just because it was the right thing to do and he had fun sharing with so many—He will be missed.

Report Spotlights Education in Major Industrialized Nations

A yearly ranking of the education systems in 30 industrialized nations shows that many countries have surpassed the United States’ rate of high school completion. The report, published by the Paris-based Organization for Economic Cooperation and Development (OECD), indicates that America ranks 10th among other industrialized nations in the share of 25- to 34-year-olds who have high school diplomas. While 87 percent of U.S. adults in that age group have at least a high school education, the percentage of high school graduates in Japan, Korea, Norway, and the Czech Republic rank above the U.S. According to OECD, high school participation rates have not declined for the United States, but they have increased much faster in other countries.
The U.S. still holds an edge in the share of adults with at least a four-year college education: among adults ages 25 to 64, the U.S. ranks second behind Canada; among adults ages 25 to 34, the U.S. ranks second behind Norway.

The study also examines teaching trends. The average number of hours a teacher is expected to teach at the lower secondary level is 714, which encompasses a range of 513 hours per year in Japan to 1,167 hours in Mexico, while the U.S. figure is 1,127 hours. Salaries per teaching hour are highest in Japan and Korea (over $80 per teaching hour) and lowest in the Slovak Republic ($10 per teaching hour). The United States has a below-average salary-to-teaching-hour ratio of $38 per teaching hour.


Opportunity

I am writing to let you know about an exciting opportunity to get involved in testing a brand new environmental ethics curriculum for high school students, which includes a 7-part video/DVD series, extensive Educator Guide, and Student Workbook. Please see the full project description below for more information.

For the testing phase, I'm asking teachers to take a look at the curriculum, test in the classroom (if possible), and provide us with some feedback that will help us tailor the curriculum to better fit the needs of educators. In return, testers will be recognized in the final version of the curriculum.

Please send me an email (including your mailing address and phone number) or give me a call if you are interested in getting involved in the development of this innovative new resource. My contact information is:

Natalie Silverstein
Outreach Coordinator
The Video Project
email: natalie@videoproject.com
website: http://www.videoproject.com
phone: 415-241-2514
fax: 415-241-2511

Thank you so much for taking the time to read this posting! I look forward to hearing from you.

Best regards, Natalie Silverstein
Kansas Association of Biology Teachers
Fall Conference
Saturday, September 17, 2005, 9:00 – 4:00
Olathe North High School

Topic: Tracing Your Connection to World Populations both Past and Present
Perform cheek cell extraction, PCR (amplification of mDNA), electrophoresis of PCR product, send off PCR product for sequencing, learn computer analysis of DNA sequences, and more . . .

Pre-registration necessary due to limited space: $15 members, $25 non-members (except 1st time attendees), $30 for membership and conference registration. [Non-members that are 1st-time attendees or pre-service teachers will only pay $15 for registration and will receive a free one-year membership]. Registration includes snacks, beverages, and noon meal (provided by Olathe North Culinary Arts) on Saturday.

Please send pre-registration check (payable to KABT) to Paula Donham, KABT Treasurer; 18258 W. 157th Terrace; Olathe, KS 66062. Include your name and email address with conference pre-registration payment; please complete membership form (see www.kabt.org for form) if paying membership.

For more information contact Randy Dix (rdixon@olatheschools.com) or Paula Donham (pdonhamoe@olatheschools.com).

Diffusion Time and Distance Relationship
By: Todd Carter

Why don’t we rely on simple diffusion only for movement of nutrients and required molecules into and waste molecules out of our cells and ultimately our bodies?

Connections: Cell Size; Limitations on long-distance transport of liquids and gases; Random path of molecules; Relationship between time and the distance traveled by a single molecule

Materials per team of 3 or 4: masking tape, a penny or coin, paper and pencil, meter stick or measuring tape

Team roles are flipper, recorder, mapper, and walker.

Direction Code:
Heads, heads – Forward one shoe length
Tails, tails- Back one shoe length
Heads, tails - Left one shoe length
Tails, heads - Right one shoe length

Procedure:
1. Mark walker starting point with tape.
2. Each pair of coin tosses determines direction. Flip until 25 steps have been taken. Recorder keeps track of flips and mapper draws picture of steps taken.
3. After 25 steps, mark final location and measure the straight-line distance from the starting point.
4. Repeat using 50 steps. Compare your results with other groups. Did you travel twice as far compared to 25 steps? What was the class average distance for 25 and 50 steps? Are the results what you expected? What general relationship is there between time and distance traveled? Apply your answer to the investigation question.
What: World Water Monitoring Day  
Date: September 18 - Oct 18, 2005  
Location: Worldwide

Over the next two months, the Kansas Department of Health & Environment will be cooperating with local watershed groups, along with citizens and other interested environmental organizations and businesses as they prepare to take part in the monitoring activities leading up to this year’s World Water Monitoring Day on October 18.

The main purpose of this educational event is to invite citizens within the global community to experience water monitoring first hand to evaluate conditions within their local watersheds. Volunteers will enter their monitoring results into a global database that stores all information collected during the monitoring period from September 18 through October 18 (www.worldwatermonitoringday.org).

We encourage you to join with thousands of volunteers across the globe to sample the water quality in your area and report your findings. To accomplish this important task, upon request KDHE environmental staff will be available to help test the waters and to serve as guides for others who join this effort.

The day’s efforts will be relatively easy and fun to carry out. Volunteers will be asked to perform and submit data from four key tests: dissolved oxygen, pH, turbidity/clarity and temperature. More experienced monitors may also complete more technical analyses such as macroinvertebrate counts (bugs), nitrogen content, phosphorus, and the speed of the water flow. Data collected by all participating monitors can be viewed at www.worldwatermonitoringday.org.

The Watershed Management Section will be donating 100 water test kits to groups and/or organizations willing to test 15 sites during the monitoring month. Each kit can test up to 50 sites. If you, your organization or group would like to participate, please contact Jaime Gaggero, 785.296.5579 / jgaggero@kdhe.state.ks.us or visit the World Water Monitoring Day website at www.worldwatermonitoringday.org.
Randy Dix is the 2004 OBTA Recipient for Kansas

Every year, the National Association of Biology Teachers (NABT) selects one outstanding biology educator in each of the 50 United States to receive its Outstanding Biology Teacher Award. This year the outstanding biology teacher in the State of Kansas is Mr. Randy Dix from Olathe North High School.

We are also excited to announce a new State of Kansas OBTA sponsor, McGraw-Hill / Glencoe. $750 has been generously donated by McGraw-Hill / Glencoe toward the expenses occurred by our OBTA recipient at the NABT National Convention. It is especially gratifying that our new OBTA sponsor has such strong ties with education. Thanks to the help of McGraw-Hill / Glencoe great Biology teaching in Kansas is being recognized with a truly prestigious award that reflects the special nature of its outstanding recipients.

Randy Dix has been teaching Biology for 28 years, the last nineteen at Olathe North High School. Randy received his Bachelor of Science in Secondary Education from Northwest Missouri State University in 1976. By taking summer and night classes, Mr. Dix received his Masters in Science Education from Northwest Missouri State University in 1983. After working as a science teacher for two Missouri High Schools, Randy moved to Olathe, Kansas. He has taught the biological sciences there since his start, in 1985. At Olathe North High School he teaches a Molecular Genetics course with several Biotechnology Labs and teaches one hour of Advanced Placement Biology. He also serves as the Science Olympiad Coach and is the Chairperson for their department. Mr. Dix is serving on the Board of Directors for the Kansas Association of Biology Teachers. He is also a member of the Kansas Association of Teachers of Science, National Association of Biology Teachers, National Science Teachers Association, National Educators Association, and the American Physiological Society.

When asked about his philosophy on science education, Mr. Dix states that his most important task as a biology teacher is to help students "become scientifically literate citizens" and to "see science as a process and not simply a collection of facts". Because of this philosophy Randy believes that students need to "...gain inquiry skills to answer questions in a logical scientific manner". And "in many cases the understanding of the process of inquiry, or the ability to carry out an investigation, is more important than the memorization of facts." Randy Dix also incorporates a great deal of technology into his classrooms. He has students: complete assignments on-line and email their homework to him, use interactive/animated web sites to master difficult concepts, collect and prepare their own DNA for computer data bank analysis, and use specialized instrumentation in the process. Specialized equipment includes: DNA and protein electrophoresis chambers, thermocyclers for PCR, CO2 incubators for tissue cultures, and palm pilots for data collection. advanced equipment. However, Mr. Dix also uses many living plants and animals in his biology classes. In one experiment Randy has students develop a lab to determine the pharmacological effects of certain drugs on aquatic worms. Randy believes students need to use technology and understand science. His students emphatically agree. A former student writes about Mr. Dix's use of technology and inquiry labs as being responsible for "preparing me for my experiences as an undergraduate researcher at the University of Kansas and Colorado State University" because they gave her the proper inquiry methods, laboratory procedures, and familiarity with new technology necessary for the experimental work that she now uses daily. Mr. Dix wants to reach all his students so he works hard to "produce lessons with multiple levels of understanding and intelligence" for his culturally diverse student population. Dr. Elizabeth Sanders, Olathe's Director of Senior High Education, states "His knowledge, patience, wit, and compassion continue to motivate even reluctant learners to success and achievement". Through his teaching Randy hopes that all his students develop an understanding and excitement for the natural world. And in turn will make better decisions and act more responsibly when living in and caring for it.

Randy Dix's educational leadership qualities for the entire State of Kansas are illustrated by his serving on the Board of Directors for the Kansas Association of Biology Teachers. Mr. Dix's leadership qualities have also been apparent to his past principal, Mr. Larry Chaney. Mr. Chaney, affirms: "Many of our staff, particularly in our science department, see Mr. Dix as a mentor. His willingness to share instructional strategies and curricular information with them has caused him to be widely respected and appreciated in our building and within our school district."

Comments from a colleague and past OBTA recipient's recommendation summarizes not only Randy's leadership ability, but the importance of his being selected for this award. "I am recommending Randy for this award because he would serve as an excellent representative of all the excellent biology teachers of this state. I use the word "serve", purposely. This award should recognize excellence and also serve as an incentive for continued service to the biology education community. Randy will shoulder that responsibility well." For his expertise in biology, his enthusiasm in the classroom, and his devotion to both his students and the entire biology education community, Mr. Randy Dix was selected as the 2004 Outstanding Biology Teacher Award recipient for the State of Kansas.
RoadKill 2003

I ran across this project the other day and thought that the suggested activities would be great short-term class projects or long-term research projects for biology classes at any level. The RoadKill project started several years ago as part of a National Science Foundation teacher enhancement grant called Environet, awarded to Simmons College in Boston. Over the past few years the Roadkill project lost its technical support and the submission of data to an online database was no longer possible. RoadKill has now moved to the CommunityNet< http://www.edutel.org/> server of Edutel Communications, Inc. Listed below are suggested activities and research projects that I found interesting, creative, and best of all, easily adaptable for classroom use or for science fair projects.

**Activities**

- Predict which type of animals will be most often and least often killed by motor vehicles in certain geographic areas.
- Estimate populations of the types of animals in the area based on roadkill data.
- Create maps related to the project.
- Graphing of weekly road kill data.
- Use data to formulate plans for wildlife corridors in your community.
- Use simple statistics to analyze the roadkill data.
- Share data with other classes and schools.
- Investigate the habitats and life histories of the animals.

**Research Projects**

- Explore the relationship between the change to daylight savings time and the number of roadkills.
- See what observable effect extreme changes in temperature and weather patterns have on the number of roadkills.
- Compare differences in the number of roadkills on an urban road versus rural roads.
- Compare roads with different speed limits and the amount of roadkills.
- Compare the effects of moon phases on the number of roadkills.
- Compare number and types of roadkills in different habitats or weather conditions.
- Analyze the effect of animal diseases on the number of roadkills.

As you can see, there are a number of open-ended investigations that could be done. More opportunities for observing nature in our mobile society!!

The next two pages contain a brief history of KABT compiled by Paul Jantzen and Stan Roth
<table>
<thead>
<tr>
<th>Year</th>
<th>President of KABT</th>
<th>Spring Field Trip</th>
<th>Fall Paper Session</th>
</tr>
</thead>
<tbody>
<tr>
<td>1938</td>
<td>O. P. Dellinger</td>
<td></td>
<td></td>
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<tr>
<td>1942</td>
<td>organization disbanded for the</td>
<td>the duration of WW II +</td>
<td></td>
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<tr>
<td>1959</td>
<td>Gerald Teague (temporary)</td>
<td>organization revived</td>
<td>KSTC, Emporia</td>
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<tr>
<td>1960</td>
<td>Sherman Nystrom</td>
<td></td>
<td>Wichita West High School</td>
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<tr>
<td>1961</td>
<td>Sherman Nystrom</td>
<td>Bethel, North Newton</td>
<td>McPherson</td>
</tr>
<tr>
<td>1962</td>
<td>Virgil Boatwright</td>
<td>Manhattan area, site of proposed Nat. Prairie Park</td>
<td>Lawrence High School</td>
</tr>
<tr>
<td>1963</td>
<td>Harland Pankratz</td>
<td>Buhler, Burton, Halstead, Harvey County Park</td>
<td>KSTC, Emporia</td>
</tr>
<tr>
<td>1964</td>
<td>John Ransom</td>
<td>Gyp Hills (Barber, Comanche, Kiowa Counties)</td>
<td>Washburn University, Topeka</td>
</tr>
<tr>
<td>1965</td>
<td>Evelyn Kovar Thompson</td>
<td>Rock Springs 4-H Ranch</td>
<td>Pittsburg State College</td>
</tr>
<tr>
<td>1966</td>
<td>Wayne Stebbins</td>
<td>Rock Springs 4-H Ranch</td>
<td>Ft. Hays State College</td>
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<tr>
<td>1967</td>
<td>Vincent Krabill</td>
<td>Hays area; Chalk beds and grasslands</td>
<td>Hesston</td>
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<tr>
<td>1968</td>
<td>Virgil Boatwright</td>
<td>Pittsburg area</td>
<td>KSU, Manhattan</td>
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<td>1969</td>
<td>Myron Schwinn</td>
<td>Eureka (Midwest Inst.)</td>
<td>KSTC, Emporia</td>
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<tr>
<td>1970</td>
<td>Kermit Daum</td>
<td>Cheyenne Bottoms</td>
<td>Garden City Jr. College</td>
</tr>
<tr>
<td>1971</td>
<td>Frank Nelson</td>
<td>Quivira Nat. Wildlife Refuge</td>
<td>Manhattan High School</td>
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<td>1972</td>
<td>Roscoe Waldorf</td>
<td>Flint Hills Nat. Wildlife Refuge, Burlington</td>
<td>Sacred Heart College, Wichita</td>
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<tr>
<td>1973</td>
<td>Kay Moorman</td>
<td>SWAN Meeting, KSTC, Emporia</td>
<td>Pratt Jr. College</td>
</tr>
<tr>
<td>1974</td>
<td>Charles Horner</td>
<td>Hutchinson, site of proposed Sand Hills State Park</td>
<td>KU, Lawrence</td>
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<tr>
<td>1975</td>
<td>Jim Arnewine</td>
<td>Cimarron Nat. Grasslands, Morton Co.</td>
<td>Microzoo, Abilene</td>
</tr>
<tr>
<td>1976</td>
<td>Paul Jantzen</td>
<td>Scott County State Lake</td>
<td>Friends Univ., Wichita</td>
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<tr>
<td>1978</td>
<td>Fred Trowbridge</td>
<td>Kirwin Nat. Wildlife Refuge</td>
<td>ESU, Ross Reservation</td>
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<td>1979</td>
<td>Fred Trowbridge</td>
<td>Crawford County St. Park</td>
<td>KU, Lawrence</td>
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<tr>
<td>1980</td>
<td>Joseph T. Collins</td>
<td>Chikaskia River, Sumner Co.</td>
<td>Sedgwick Co. Zoo, Wichita</td>
</tr>
<tr>
<td>1981</td>
<td>Joseph T. Collins</td>
<td>Clark County State Lake</td>
<td>Land Institute, Salina</td>
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<tr>
<td>1982</td>
<td>John Wachholz</td>
<td>Marais Des Cygnes Nat. Wildlife Refuge</td>
<td>FHSU, Hays</td>
</tr>
<tr>
<td>1983</td>
<td>John Wachholz</td>
<td>Konza Prairie Research Natural Area</td>
<td>Gage Park Zoo, Topeka</td>
</tr>
<tr>
<td>1984</td>
<td>Louis Bussjaeger</td>
<td>Squaw Creek Nat. Wildlife Refuge Missouri</td>
<td>Camp Aldridge, Gt. Bend</td>
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<tr>
<td>1985</td>
<td>Marc Linton</td>
<td>Sherman and Wallace Counties</td>
<td>W.S.U., Wichita</td>
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<tr>
<td>1986</td>
<td>Marc Linton</td>
<td>Milford Lake and Wakefield area</td>
<td>Ozark Underground Lab, Taney Co., MO</td>
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<tr>
<td>1987</td>
<td>Brad Williamson</td>
<td>Quivira Nat. Wildlife Refuge</td>
<td>E.S.U., Emporia</td>
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<tr>
<td>1988</td>
<td>Brad Williamson</td>
<td>Rock Springs Ranch with KATS</td>
<td>Benedictine, Atchison</td>
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<tr>
<td>1989</td>
<td>Pat Wakeman</td>
<td>Pittsburg State Univ. and area</td>
<td>K.S.U., Manhattan</td>
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</table>
### Presidents of KABT

<table>
<thead>
<tr>
<th>Year</th>
<th>President of KABT</th>
<th>Spring Field Trip</th>
<th>Fall Paper Session</th>
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<tbody>
<tr>
<td>1990</td>
<td>Pat Wakeman</td>
<td>Chatauqua Hills</td>
<td>Prairie Center, Olathe</td>
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<td>1991</td>
<td>Pat Wakeman</td>
<td>Salina with Prairie Festival at Land Institute</td>
<td>Rock Springs Ranch, Junction City</td>
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<td>1992</td>
<td>Pat Lamb</td>
<td>Milford Reservoir</td>
<td>K.S.U., Manhattan</td>
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<td>1993</td>
<td>Pat Lamb</td>
<td>Planned for Cimarron Nat. Grasslands; cancelled</td>
<td>Salina</td>
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<tr>
<td>1994</td>
<td>Pat Lamb</td>
<td>Cheyenne Bottoms/Quivira Nat. Wildlife refuge</td>
<td>K.U., Lawrence</td>
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<tr>
<td>1995</td>
<td>Steve Case</td>
<td>Prairie Center, Olathe</td>
<td>Olathe East H.S.</td>
</tr>
<tr>
<td>1996</td>
<td>Steve Case</td>
<td>Matfield Green and Z-Bar Ranch; Pawnee Nat. Grasslands, CO</td>
<td>E.S.U., Emporia</td>
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<tr>
<td>1997</td>
<td>Terry Callender</td>
<td>Gyp Hills/Belvidere area</td>
<td>FHSU, Hays w/ KESTA</td>
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<tr>
<td>1998</td>
<td>Terry Callender</td>
<td>Kanopolis Lake, Ellsworth Co.</td>
<td>Olathe East High School</td>
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<tr>
<td>1999</td>
<td>Lisa Volland</td>
<td>Eureka City Lake and Fall River--Greenwood County</td>
<td>Sternberg Museum, FHSU, Hays, KS</td>
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<tr>
<td>2000</td>
<td>Lisa Volland</td>
<td>Cimarron National Grasslands, Morton County</td>
<td>Great Plains Nature Center, Wichita, KS</td>
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<tr>
<td>2001</td>
<td>Harry McDonald</td>
<td>East Johnson Co.</td>
<td>Manhattan</td>
</tr>
<tr>
<td>2002</td>
<td>Harry McDonald</td>
<td>Smoky Valley Ranch</td>
<td>Salina Cen. HS(shar-a-thon)</td>
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<tr>
<td>2003</td>
<td>Sandy Collins</td>
<td>S. Central KS (Mike Fell)</td>
<td>BC Comm.College-Great Bend</td>
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<tr>
<td>2004</td>
<td>Sandy Collins</td>
<td>West Bend and Leavenworth Bottoms</td>
<td>WSU and Great Plains Nature Center</td>
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<tr>
<td>2005</td>
<td>Todd Carter</td>
<td>Ash Fall State Park, Nebraska</td>
<td>Olathe North (biotechnology)</td>
</tr>
</tbody>
</table>

### NABT Presidents from Kansas
- Homer A. Stephens 1942
- John Breukelman 1957
- Ted Andrews 1964
- Jack Carter 1977
- Stan Roth 1980
- Brad Williamson 2002

### Executive Secretaries of KABT
- Stan Roth 1962–1983
- Bob Rose 1983–1990

### Editors of Newsletter and Journal
- John Ransom
- Paul Jantzen
- John Wachholz
- Richard Schrock (KBT editor)
- Harry McDonald

### OBTA Winners
List to be assembled from Kansas Biology Teacher
<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>School</th>
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<tbody>
<tr>
<td>1962</td>
<td>Gerald Tague</td>
<td>Wichita High School East</td>
</tr>
<tr>
<td>1963</td>
<td>John Ransom</td>
<td>Derby High School</td>
</tr>
<tr>
<td>1964</td>
<td>George Toland</td>
<td>Salina High School</td>
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<tr>
<td>1965</td>
<td>Sherm Nystrom</td>
<td>Wichita High School West</td>
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<tr>
<td>1966</td>
<td>Stanley D. Roth</td>
<td>Lawrence High School</td>
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<tr>
<td>1967</td>
<td>Sister Stephan McCollum</td>
<td>Luckey High School, Manhattan</td>
</tr>
<tr>
<td>1968</td>
<td>Richard Dawson</td>
<td>Shawnee Mission North</td>
</tr>
<tr>
<td>1969</td>
<td>Paul Willis</td>
<td>Shawnee Heights High School</td>
</tr>
<tr>
<td>1970</td>
<td>Gene Hampton</td>
<td>Shawnee Mission South</td>
</tr>
<tr>
<td>1971</td>
<td>Lloyd Fugate</td>
<td>Turner High School</td>
</tr>
<tr>
<td>1972</td>
<td>Frank Nelson</td>
<td>Emporia Senior High School</td>
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<tr>
<td>1973</td>
<td>Jerry Murray</td>
<td>Shawnee Mission South</td>
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<tr>
<td>1974</td>
<td>Dean Jernigan</td>
<td>Shawnee Mission South</td>
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<td>1975</td>
<td>Kermit Daum</td>
<td>Derby High School</td>
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<td>1976</td>
<td>Lorraine Davis</td>
<td>Parsons High School</td>
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<td>1977</td>
<td>Wendell Mohling</td>
<td>Shawnee Mission Northwest</td>
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<tr>
<td>1978</td>
<td>Ken Bingman</td>
<td>Shawnee Mission West</td>
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<td>1979</td>
<td>Ron Fox</td>
<td>Shawnee Mission East</td>
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<tr>
<td>1980</td>
<td>George Ratzlaff</td>
<td>Hutchinson Central Jr. High</td>
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<td>Marc Linton</td>
<td>Logan Jr. High, Topeka</td>
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<td>1984</td>
<td>George Creighton</td>
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<td>1985</td>
<td>Barry Schartz</td>
<td>Goddard High School</td>
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<td>John Wachholz</td>
<td>Salina High School Central</td>
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<td>1987</td>
<td>Myron Schwinn</td>
<td>Manhattan High School</td>
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<td>1988</td>
<td>Clarke Schartz</td>
<td>Shawnee Mission North</td>
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<td>1989</td>
<td>Brad Williamson</td>
<td>Remington-Whitewater H.S.</td>
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<td>Steven Case</td>
<td>Olathe South High School</td>
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<td>1991</td>
<td>Terry Calendar</td>
<td>Wamego High School</td>
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<tr>
<td>Year</td>
<td>Name</td>
<td>School</td>
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<td>------</td>
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<tr>
<td>1992</td>
<td>Becky Goodwin</td>
<td>Kansas School for the Deaf</td>
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<tr>
<td>1993</td>
<td>James Lockard</td>
<td>Shawnee Mission East</td>
</tr>
<tr>
<td>1994</td>
<td>Pat Lamb</td>
<td>Manhattan High School</td>
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<tr>
<td>1995</td>
<td>Ken Highfill</td>
<td>Lawrence High School</td>
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<td>1996</td>
<td>Harry McDonald III</td>
<td>Blue Valley High School</td>
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<td>1997</td>
<td>Janell Mead</td>
<td>Pratt High School</td>
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<td>1998</td>
<td>John Harclerode</td>
<td>Emporia High School</td>
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<tr>
<td>1999</td>
<td>Larry Ballard</td>
<td>Hutchinson High School</td>
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<tr>
<td>2000</td>
<td>Ernest Brown</td>
<td>Trego Community High School</td>
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<tr>
<td>2001</td>
<td>Lisa Volland</td>
<td>Topeka West High School</td>
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<tr>
<td>2002</td>
<td>Jody Marquardt</td>
<td>Emporia High School</td>
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<tr>
<td>2003</td>
<td>J.D. Hand</td>
<td>Augusta High School</td>
</tr>
<tr>
<td>2004</td>
<td>Randy Dix</td>
<td>Olathe North High School</td>
</tr>
</tbody>
</table>
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KABT Regions

KABT Newsletter V43 N3
Counties In Region 1
Cheyenne, Decatur, Ellis, Gove, Graham, Logan, Norton, Osborne, Phillips, Rawlins, Rooks, Russell, Sheridan, Sherman, Smith, Thomas, Trego, Wallace

Counties, In Region 2

Counties In Region 3
Atchinson, Brown, Doniphan, Douglas, Franklin, Jackson, Jefferson, Johnson, Leavenworth, Miami, Nemaha, Osage, Wyanodotte

Counties In Region 4
Barber, Barton, Clark, Comanche, Edwards, Finney, Ford, Grant, Gray, Greeley, Hamilton, Haskell, Hodgeman, Kearny, Kiowa, Lane, Meade, Morton, Ness, Pawnee, Pratt, Rush, Scott, Seward, Stafford, Stanton, Stevens

Counties In Region 5
Butler, Coffey, Cowley, Harper, Harvey, Kingman, Reno, Sedgwick, Sumner

Counties In Region 6
Allen, Anderson, Bourbon, Chautauqua, Cherokee, Crawford, Elk, Greenwood, Labette, Linn, Montgomery, Neosho, Wilson, Woodson

Your membership expiration date can be found on your mailing label. Starting immediately, all dues received before June 30th will be applied to the current year if you are past due. If your dues are current, they will apply for the extended year of your current due date. Dues received and postmarked between June 30th and September 30th will be applied to the next year of membership.

KABT Membership Application or Renewal Form—ONLY USE CURRENT NEWSLETTER FORM!

Name: ______________________________________________________________________________________ (Mr.-Mrs.-Ms.-Dr.-Miss) First Name Last Name

Mailing Address: __________________________________________________________________________

City: _______________________ County _______ State: _____ Zip: _____________ - ____________

School/Institution: ______________________________________________________________________

Position: _______________________________________________________________________________

City: ____________________________________________________________________________________ State: __ Zip: _____________ - ____________

Phone: Work (____) _____ - __________ Home: (____) _____ - __________

FAX: (___) ___ - ____ Email Address: ______________@_________________________

Enclosed Dues For KABT $15/Year($5 Student)—Life Membership Available For $300
National Association of Biology Teacher Dues: $65.00 / Year
Dues Payment For Next Year Must Be Received Between Dates Of June 1st to September 30th
Dues Received On Dates Preceding June 1st Or After September 30th Will Be Applied To Current Year
Make Check Payable To KABT - Tax ID #: 48-0945206
Send Dues & Information To:
Kansas Association of Biology Teachers
18258 W. 157th Terrace
Olathe, KS 66062
17 Sept 2005       KABT fall meeting/conference
30 Sept-2 Oct 2005 Kansas Native Plant Society annual meeting, Coldwater KS
              [formerly KS Wildflower Soc.]
30 Sept-2 Oct 2005 Kansas Ornithological Society annual meeting, GPNS, Wichita KS
5-8 Oct 2005       NABT annual convention, Milwaukee WS
4-5 Nov 2005       Kansas Herpetological Society annual meeting, PSU, Pittsburg KS
4-5 Nov 2005       Kansas Assn. of Conservation & Environmental Ed. annual
                    meeting, Hutchinson

For anyone interested in acronym explanation and/or further information, please contact S. Roth. Also contact S.R. if you have other calendar events of interest to KS biology teachers.