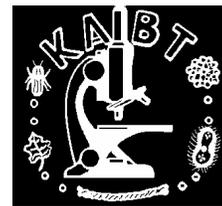


# Kansas Association of Biology Teachers Newsletter

Volume 46 Number 1 - Fall, 2005/2006



KABT Web Site

<http://kabt.org>

NABT Web Site

<http://www.nabt.org>

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### PRESIDENT'S COLUMN

#### 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.

1

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](http://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

Senge, P. et. al. (2000). *Schools That Learn: A Fifth Discipline Fieldbook for Educators, Parents, and Everyone Who Cares about Education*. Doubleday. New York.

*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. They 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 [biologyctrack@hotmail.com](mailto:biologyctrack@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 **except for the changes they put in their draft.**

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](http://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.

[www.aaas.org/news/press\\_room/evolution/](http://www.aaas.org/news/press_room/evolution/)

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 known species of frogs, toads, salamanders, and caecilians. To access this information, go to [www.globalamphibians.org](http://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#](http://Www.pbs.org/americanfieldguide/index.html#)

Or

[Www.bawsca.org/hetch.html](http://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](http://www.nsd.org/) (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.bioscienet.org/portal/>>

Texas Instruments is maintaining a website sharing online activities created by educators, TI, 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](http://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:

<http://www.eeob.iastate.edu/faculty/crewesC/htdocs/beatenpath.htm>.

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.

To read a story published in the September 14 edition of *The Washington Post*, go to <http://www.washingtonpost.com/wp-dyn/articles/A19421-2004Sep14.html>. For more information about the report "Education at a Glance," go to <http://www.oecd.org>.

### 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](mailto: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 1<sup>st</sup> time attendees), \$30 for membership and conference registration. [Non-members that are 1<sup>st</sup>-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. 157<sup>th</sup> Terrace; Olathe, KS 66062. Include your name and email address with conference pre-registration payment; please complete membership form (see [www.kabt.org](http://www.kabt.org) for form) if paying membership.**

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

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**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.

AMERICA'S  
CLEAN WATER  
FOUNDATION



International Water Association  
Contact Jaime Gaggero  
Kansas Department of Health and Environment  
Telephone: 785-296-5579  
FAX: 785-296-5509  
E-mail: [jgaggero@kdhe.state.ks.us](mailto:jgaggero@kdhe.state.ks.us)  
[www.kdhe.state.ks.us/nps](http://www.kdhe.state.ks.us/nps)

**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](http://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](http://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](mailto:jgaggero@kdhe.state.ks.us) or visit the World Water Monitoring Day website at [www.worldwatermonitoringday.org](http://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**

<b>Year</b>	<b>President of KABT</b>	<b>Spring Field Trip</b>	<b>Fall Paper Session</b>
1938	O. P. Dellinger		
1942	organization disbanded for the	the duration of WW II +	
1959	Gerald Teague (temporary)	organization revived	KSTC, Emporia
1960	Sherman Nystrom		Wichita West High School
1961	Sherman Nystrom	Bethel, North Newton	McPherson
1962	Virgil Boatwright	Manhattan area, site of proposed Nat. Prairie Park	Lawrence High School
1963	Harland Pankratz	Buhler, Burton, Halstead, Harvey County Park	KSTC, Emporia
1964	John Ransom	Gyp Hills (Barber, Comanche, Kiowa Counties)	Washburn University, Topeka
1965	Evelyn Kovar Thompson	Rock Springs 4-H Ranch	Pittsburg State College
1966	Wayne Stebbins	Rock Springs 4-H Ranch	Ft. Hays State College
1967	Vincent Krabill	Hays area; Chalk beds and grasslands	Hesston
1968	Virgil Boatwright	Pittsburg area	KSU, Manhattan
1969	Myron Schwinn	Eureka (Midwest Inst.)	KSTC, Emporia
1970	Kermit Daum	Cheyenne Bottoms	Garden City Jr. College
1971	Frank Nelson	Quivira Nat. Wildlife Refuge	Manhattan High School
1972	Roscoe Waldorf	Flint Hills Nat. Wildlife Refuge, Burlington	Sacred Heart College, Wichita
1973	Kay Moorman	SWAN Meeting, KSTC, Emporia	Pratt Jr. College
1974	Charles Horner	Hutchinson, site of proposed Sand Hills State Park	KU, Lawrence
1975	Jim Arnewine	Cimarron Nat. Grasslands, Morton Co.	Microzoo, Abilene
1976	Paul Jantzen	Scott County State Lake	Friends Univ., Wichita
1977	L. O. Breckenridge	McPherson Co. State Lake, Maxwell, Hv. Co. Park	Salina Central High School
1978	Fred Trowbridge	Kirwin Nat. Wildlife Refuge	ESU, Ross Reservation
1979	Fred Trowbridge	Crawford County St. Park	KU, Lawrence
1980	Joseph T. Collins	Chikaskia River, Sumner Co.	Sedgwick Co. Zoo, Wichita
1981	Joseph T. Collins	Clark County State Lake	Land Institute, Salina
1982	John Wachholz	Marais Des Cygnes Nat. Wildlife Refuge	FHSU, Hays
1983	John Wachholz	Konza Prairie Research Natural Area	Gage Park Zoo, Topeka
1984	Louis Bussjaeger	Squaw Creek Nat. Wildlife Refuge Missouri	Camp Aldridge, Gt. Bend
1985	Marc Linton	Sherman and Wallace Counties	W.S.U., Wichita
1986	Marc Linton	Milford Lake and Wakefield area	Ozark Underground Lab, Taney Co., MO
1987	Brad Williamson	Quivira Nat. Wildlife Refuge	E.S.U., Emporia
1988	Brad Williamson	Rock Springs Ranch with KATS	Benedictine, Atchison
1989	Pat Wakeman	Pittsburg State Univ. and area	K.S.U., Manhattan

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

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

### Outstanding Biology Teachers Award Winners For Kansas

Year	Name	School
1962	Gerald Tague	Wichita High School East
1963	John Ransom	Derby High School
1964	George Toland	Salina High School
1965	Sherm Nystrom	Wichita High School West
1966	Stanley D. Roth	Lawrence High School
1967	Sister Stephan McCollum	Luckey High School, Manhattan
1968	Richard Dawson	Shawnee Mission North
1969	Paul Willis	Shawnee Heights High School
1970	Gene Hampton	Shawnee Mission South
1971	Lloyd Fugate	Turner High School
1972	Frank Nelson	Emporia Senior High School
1973	Jerry Murray	Shawnee Mission South
1974	Dean Jernigan	Shawnee Mission South
1975	Kermit Daum	Derby High School
1976	Lorraine Davis	Parsons High School
1977	Wendell Mohling	Shawnee Mission Northwest
1978	Ken Bingman	Shawnee Mission West
1979	Ron Fox	Shawnee Mission East
1980	George Ratzlaff	Hutchinson Central Jr. High
1981	No Award	
1982	Marc Linton	Logan Jr. High, Topeka
1983	No Award	
1984	George Creighton	Olathe North High School
1985	Barry Schartz	Goddard High School
1986	John Wachholz	Salina High School Central
1987	Myron Schwinn	Manhattan High School
1988	Clarke Schartz	Shawnee Mission North
1989	Brad Williamson	Remington-Whitewater H.S.
1990	Steven Case	Olathe South High School
1991	Terry Calendar	Wamego High School

1992	Becky Goodwin	Kansas School for the Deaf
1993	James Lockard	Shawnee Mission East
1994	Pat Lamb	Manhattan High School
1995	Ken Highfill	Lawrence High School
1996	Harry McDonald III	Blue Valley High School
1997	Janell Mead	Pratt High School
1998	John Harclerode	Emporia High School
1999	Larry Ballard	Hutchinson High School
2000	Ernest Brown	Trego Community High School
2001	Lisa Volland	Topeka West High School
2002	Jody Marquardt	Emporia High School
2003	J.D. Hand	Augusta High School
2004	Randy Dix	Olathe North High School

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KABT Regions

Cheyenne	Rawlins	Decatur	Norton	Phillips	Smith	Jewell	Republic	Washington	Marshall	Nemaha	Brown	Doniphan
Sherman	Thomas	Sheridan	Graham	Rooks	Osborne	Mitchell	Cloud	Clay	Riley	Pottawatomie	Jackson	Atchison
Wallace	Logan	Gove	Trego	Ellis	Russell	Lincoln	Ottawa	Dickinson	Geary	Wabaunsee	Cherokee	Wagoner
Greeley	Wichita	Scott	Lane	Ness	Rush	Barton	Ellsworth	Saline	McPherson	Marion	Chase	Lyon
Hamilton	Kearny	Finney	Hodgeman	Pawnee	Stafford	Reno	Harvey	Butler	Greenwood	Woodson	Allen	Bourbon
Stanton	Grant	Haskell	Gray	Ford	Kiowa	Pratt	Kingman	Sedgwick	Elk	Wilson	Neosho	Crawford
Morton	Stevens	Seward	Meade	Clark	Comanche	Barber	Harper	Sumner	Cowley	Chautauque	Montgomery	Labette
												Cherokee

**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**

Chase, Clay, Cloud, Dickinson, Ellsworth, Geary, Jewell, Lincoln, Lyon, Marion, Marshall, McPherson, Mitchell, Morris, Ottawa, Pottawatomie, Republic, Rice, Riley, Saline, Shawnee, Wabaunsee, Washington

**Counties In Region 3**

Atchinson, Brown, Doniphan, Douglas, Franklin, Jackson, Jefferson, Johnson, Leavenworth, Miami, Nemaha, Osage, Wyandotte

**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  
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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



# Kansas Association of Biology Teachers

## CALENDAR

- 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 WI**
- 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.