

1996

Awards and Recognition, Iowa Academy of Science, 1996

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Recommended Citation

(1996) "Awards and Recognition, Iowa Academy of Science, 1996," *The Journal of the Iowa Academy of Science: JIAS*: Vol. 103: No. 3-4 , Article 6.

Available at: <http://scholarworks.uni.edu/jias/vol103/iss3/6>

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AWARDS AND RECOGNITION IOWA ACADEMY OF SCIENCE 1996

DISTINGUISHED FELLOW

Jerald Schnoor

An exceptional researcher and scholar, Iowa native Jerald Schnoor has established an international reputation within the science community. Professor Schnoor is a frequent lecturer, most recently presenting the 13th Annual Presidential Lecture at the University of Iowa in March 1996. In addition, he has presented lectures and seminars on a myriad of topics including global warming, global environmental problems, and the Rio Earth Summit Perspective. He has authored or co-authored over eighty-three publications, and has been the principal investigator on numerous grants. Dr. Schnoor is Co-Director of the University of Iowa's Center for Global and Regional Environmental Research. Through his classes on environmental modelling, he promotes an ethic of environmental concern, careful investigation, and public responsibility. Professor Schnoor has been the recipient of the University of Iowa Scholar Award, the Iowa Board of Regent's Award for Faculty Excellence, and the University of Iowa Foundation Distinguished Professor Award. In addition, Dr. Schnoor has been recognized for his work with the American Academy of Environmental Engineers, was a National Academy of Sciences exchange scientist to Czechoslovakia, and served as chair of the Gordon Research Conference on Environmental Science. His contributions to science knowledge in Iowa and the throughout the world have made him an integral part of the Iowa science community.

DISTINGUISHED IOWA SCIENTIST

David Benn

Dr. David Benn is widely recognized as one of the most productive and innovative archaeologists in the Midwest. For the last twenty-five years he has been conducting archaeological investigations throughout Iowa. His research and teaching have greatly influenced archaeological theory and practice—in many cases presenting new and valuable insights into the methodologies and theoretical approaches to archaeological research. In particular, his development of a predictive landscape model has virtually revolutionized the way archaeologists view site preservation and destruction, site survey, and the management of cultural resources. Dr. Benn received his B.A. degree from Purdue University, and his M.A. and Ph.D. from the University of Wisconsin-Madison. In the years since his graduation, he has published numerous scholarly works, among them over thirty articles in refereed journals and special publications. Through his work with the Iowa Archaeological Society, Dr. Benn has played a major role in educating the public about Iowa archaeology, its methods, theory, and ethics. Having served on the faculties of Southwest Missouri State University and Luther College, Dr. Benn now serves as an independent archaeological consultant.

DISTINGUISHED SERVICE

Paul Christiansen

Paul Christiansen's hard work, high standards, and dedication to teaching have made him a leader in the Iowa science community. A major force in developing programs on prairie restoration and reconstruction for more than a quarter of a century, Dr. Christiansen has

dedicated his life to the protection and management of Iowa's prairie environments. His contributions as a teacher are many—among them are patience, willingness to find innovative ways of approaching coursework, and dedication to a sense of respect and appreciation for the natural world. A graduate of the University of Iowa, the University of Oregon, and Iowa State University, Dr. Christiansen has taught extensively, sharing his expertise with a myriad of advisory boards and science organizations throughout the state. He has been a member (and served on the board) of the Iowa Chapter of the Nature Conservancy, the Iowa State Preserves Advisory Board, the Integrated Vegetation Management Technical Advisory Board, and the Iowa Academy of Science, among others. He is the author of numerous publications and reports, and has given presentations throughout the state. Dr. Christiansen has received grants from the Iowa Highway Commission, Iowa State University, the Iowa Science Foundation, and the Living Roadway Trust Fund, and has been recognized by the University of Iowa, Oregon State University, and the American Lutheran Church for his contributions as a teacher and scientist. In combining a career of science and service, Dr. Christiansen has made a valuable contribution to his native state of Iowa.

DISTINGUISHED IOWA SCIENCE TEACHING

Neil Bernstein

Neil Bernstein, a member of the Mt. Mercy College faculty for the past fourteen years, is well-known for his dedication and achievements within the Iowa science community. His many accomplishments include recent work to integrate ecological methodology in an elementary classroom in Cedar Rapids, and ongoing efforts to promote science education in the surrounding community. Dr. Bernstein has pioneered several innovative teaching techniques, including use of the video microscope in general botany classes, guided design projects, and incorporation of computer technology in the science curriculum at Mt. Mercy. In addition to teaching, He has served on the Board of Directors of the Indian Creek Nature Center, been a consultant-evaluator for the North Central Association of Colleges and Schools, and served in various capacities on committees and boards of numerous statewide and national organizations. He has been a Fellow in the RISK Project of the University of Iowa Interdisciplinary Program in Literature, Science, and the Arts; has received the Sears-Roebuck Foundation Teaching Excellence & Campus Leadership Award, and has been awarded the Iowa Nature Conservancy Recognition Award for his work and research on preserves and promotion of environmental education. Dr. Bernstein's outstanding commitment to science education at all levels has earned him the respect and admiration of his colleagues throughout the state.

DISTINGUISHED IOWA SCIENCE TEACHING

Robert Olson

Robert Olson is a strong advocate for science education. As a teacher, he has designed experiments that allow for creativity and teach problem-solving skills. His dedication to his work and his ability to make difficult subjects interesting and easy to comprehend, have brought him the praise and admiration of both students and colleagues. At Briar Cliff College, where he has been a member of

the Biology faculty since 1981, Dr. Olson has played an active role in developing and improving the science facilities. Through fundraising and planning activities, he has helped create a cadaver lab, upgrade facilities and equipment, and develop an internship program to help students gain valuable experience in a number of science fields. As a resource person, he has reviewed textbooks, acted as a judge for the local and national Quiz Bowl, and served as moderator for review panels of the National Science Foundation Teacher Enhancement Program. Dr. Olson received degrees from the College of Great Falls, Montana, the University of North Dakota, and the University of Minnesota. He is listed in the *Who's Who in the Midwest*, *Who's Who in American Education*, and *Who's Who in the World*, and has received the Burlington Northern Distinguished Faculty Award and the NDEA Fellow Award. By example, Dr. Olson encourages everyone around him to strive for high standards of performance. Through both his work and community service, he has shown that hard work and dedication do bring success.

EXCELLENCE IN SCIENCE TEACHING AWARD

Elementary School Science

Elizabeth (Libby) Laughlin

If you were to visit Libby Laughlin's Third Grade class at North Hill Elementary School, you might find yourself doing much more than merely observing. You might join in a group of children learning how to study and care for mealworms, or you might help children test objects to gain an understanding of density. Libby believes that parents play an integral role in the education of their children, and over the years she has developed a number of creative activities and materials to encourage parents to get involved. She has initiated Family Math and Science Nights where families experience small, cooperative-learning groups and each member is fully engaged as an active participant. She also created Science Take-Home Bags, brightly-colored bags that contain a myriad of possibilities for learning about science. These activities bridge economic boundaries and provide families with successful problem-solving experiences.

Children in Libby's classroom learn in a child-centered curriculum with exploratory and manipulative materials, and there are plenty of opportunities for interaction and communication. She believes the goal of education is to produce problem-solvers who are creative and critical, and she strives to provide an integrated approach to science instruction that allows children to understand the role and use of science in a technological world. Libby wants her students to learn to look beyond isolated facts and discover that everything affects everything, because the world is really one great system. Her primary reward in teaching is observing students enhance their capabilities for learning in ways that will have a positive and lasting influence on their lives.

Libby's dedication to creative science education does not stop in the classroom. She is co-director of the Activity-Based Science Project for the State of Iowa, and an integral committee member of the district's science curriculum study and review team. She has taught—and continues to teach—staff development classes year round in AEA 16, and regularly presents at state math and science conferences, conducts workshops across the state, and has authored numerous primary math/science activities.

EXCELLENCE IN SCIENCE TEACHING AWARD

Physics

Ronald J. Newland

On any school day you can find Ron in his classroom at Prairie High School, students gathered around him working, listening,

watching, learning, and having fun. Ron has discovered how to create a balance between discussion, problem-solving, and laboratory activities, a balance that creates magic in the classroom. The secret to his success is that he believes all students can learn, and that science and technology are part of the basics for students of today and tomorrow. By using complex gadgets and lots of humor in each lesson, Ron is able to get students involved through hands-on activities that are well-designed and purposefully planned. Whether they're engaged in special projects such as building bridges, air-powered cars, or flying models, or actively participating in demonstrations or group discussions, Ron likes to encourage his students ultimately to apply their knowledge to each new project or situation. If students have an interest in an area or topic outside the classroom, he encourages them to investigate it. That's what learning is all about.

Ron feels that physics is a good background course for everyone, not just the college-bound senior. He believes students can benefit from both the knowledge and problem-solving skills involved with physics in particular and science in general. If students have basic scientific knowledge and can apply this to new situations, and have had practice solving many different styles of problems, they will be better able to understand and use the new technology that surrounds them. He values the relationships he builds with his students, and believes it is important to be honest, caring, fair, knowledgeable, and willing to say "I don't know."

Outside the classroom, Ron's expertise and respect for other teachers have allowed him to be an effective member of the Cadre Leadership Team, a group that works for positive change at Prairie High School. In addition, he believes in reaching out to the community and including business and industry as a resource for his classroom, initiating efforts that have brought thousands of dollars of donated equipment into his school. He belongs to numerous local, regional, and national science and education associations, and has been recognized by both the Iowa Academy of Science and the University of Northern Iowa for his contributions to the teaching of physics.

EXCELLENCE IN SCIENCE TEACHING AWARD

Environmental Education

Margaret Sadeghpour-Kramer

"We cannot teach students everything they will need to know, only how to learn it when they need it." This philosophy is an apt description of Margaret's approach to science education as a way of finding out about the physical and biological world. In her classrooms at Lincoln Community School, students are given a wide range of learning opportunities and are strongly encouraged to direct and take responsibility for their own education. Her goal is to give students opportunities to learn and practice identifying questions, look for answers, follow through, analyze information, make reasonable conclusions, take responsible actions, and keep minds open to new information—all the skills of an independent learner. Working in small cooperative groups, they use original experimental research, library research, and secondary sources such as letter-writing, interviews, guest speakers, and media sources to gather information. Many units incorporate field trips—to a local quarry, a conservation area, a no-till farm, a sewage treatment plant, a raptor rehabilitation center, the rain forest at Henry Doorly Zoo (Omaha NB). Guest speakers frequently come to the classroom to give presentations. Students make their own videos to share things that only one or a few of them are actually able to see in person.

To Margaret, learning is making connections between content, causes, and consequences. Students need to know they have learned what they wanted to know, that they really did something about the problem, and they did it on their own. To help them learn these

skills, Margaret's classes are action-oriented, student-centered, cooperative experiences related to the environment and its care and preservation. Student actions are a very important aspect of most units, because knowing about an issue is only the first step. Margaret believes that in order for students to feel they have any power to influence their environment, they must actually follow through and do something that has tangible results. To culminate each science unit, she requires some form of student action—draft and circulate petitions, write and perform an informative skit, or involve their families in activities that will have an environmental impact in their homes and communities. Students utilize reading, writing, language, and mathematics skills in an environment of cooperative learning where all are enabled to succeed.

A truly dedicated professional, Margaret is also a caring and knowledgeable co-worker. She continually studies to keep up-to-date in the field of science. Her genuine love of children is apparent in her teaching style, and she infuses the children in her classroom with a dedication to and enthusiasm for the environment and its care and preservation.

EXCELLENCE IN SCIENCE TEACHING AWARD General/Multiple Science

Kevin Jay Brassler

Expect the unexpected! That's how Kevin's students would describe his classes at South O'Brien High School, and they love it! Most days, students have no idea what he is going to do the next time they come through the door. He once shot a pistol to make a DNA murder scene more realistic! Kevin constantly creates innovative teaching activities to motivate his students. His colleagues say his teaching is on the cutting edge, and he works diligently to stay there because he believes his students deserve the best he has to offer. Kevin admits that he has done a lot of changing in his teaching style over the years. A growing awareness that students have to first want to learn and that teachers have to give them opportunities to use that ambition, has sparked a renewed interest in making his classroom an exciting place. Students need to be doing things with their hands, and they need to learn how to find information, not just take it in. Kevin teaches his students to take concepts, apply them to their lives, and use them to solve real-life problems. He tries to have meaningful laboratory, hands-on instruction as much as possible. Through cooperative effort and learning, his students can go beyond the textbook and into the real world. After all, science is everywhere, not just sitting in a desk.

Kevin's energies are always focused on the classroom, but that doesn't stop him from active involvement in a myriad of activities, both at work and in his community. He is a warm, dedicated teacher, sincerely interested in and concerned about his students' educational pursuits and futures. Perhaps that is why students and teachers frequently seek him out for advice and friendly conversation. Many of his former students return each year to visit and receive counsel. Kevin inspires those around him because of one simple fact—he truly enjoys what he is doing.

EXCELLENCE IN SCIENCE TEACHING AWARD Chemistry

Bruce A. Wilson

By design and force of personality Bruce has created a learning environment at City High School that draws students into the world of chemistry. He believes it is his job to make students think, to provoke them into changing preconceived notions and force them to

defend what they know. To do this, Bruce provides them with experiences and situations that are new and unfamiliar. He encourages them to accept academic challenges and take intellectual risks. By allowing students to do science rather than simply read, recite, and regurgitate it, he hopes to kindle their interest and enthusiasm in science as a real-world experience. Bruce has developed a curriculum that is both demanding and also very popular among students. Students are frequently found working in the lab or classroom before and after school, during free periods and many evenings, and Bruce is there with them, graciously donating time and expertise in extra help sessions and make-up work.

Exceptional as his teaching skills are, his rapport with students is legendary, which allows him to effectively motivate slow learners and gifted students alike. He is unfailingly upbeat, his energy is boundless, and his positive outlook is both electric and magnetic. Always searching for ways to improve the teaching of science, Bruce incorporates experiences that he believes can reach across curriculum boundaries to promote his students' sense of importance and self-esteem. He uses his innovative lab activities to allow students to develop their minds as well as expand their knowledge. In short, Bruce is always willing to go the extra mile to help those students in need, and he challenges them all!

Outside the classroom, Bruce shares his knowledge and enthusiasm by leading classes and sessions for other science teachers. He has played an important role in the Iowa City Community Schools' Strategic Planning initiative and been director of City High's Student Assistance Team and the shared-decision-making Building Vertical Team. He continually works to improve his classes, and is very willing to share ideas with others. This sharing comes in the form of presentations at professional conferences and in giving workshops during the summer. Bruce's dedication is evident in every aspect of his work, but most especially in the high regard in which he is held by students and colleagues alike.

EXCELLENCE IN SCIENCE TEACHING AWARD Biology

Tina Koepnick

Tina believes that in a world becoming more oriented toward and dependent upon science and technology, responsible citizens must have an awareness and understanding of the nature and processes of science if they are to make responsible decisions regarding their futures. In her classroom at City High School, she teaches her students the skills they will need to be responsible, productive citizens of the twenty-first century. She wants them to understand that all knowledge is operational; facts and conclusions are temporary, at best, and must be reexamined in light of each new discovery. In her lab, science ceases to be a body of knowledge embedded in a textbook and reveals its true character: an open inquiry into nature. Tina has initiated a program where her biology students are involved with current research in the Human Genome Project at the University of Iowa. The opportunity to involve students directly in research with hands-on laboratory explorations requires her students to learn science by doing science. They also benefit from direct contact with working scientists. Tina's classes are student-driven, allowing them to construct meaning from their own experiences with their data. In all she does, she effectively balances the need to provide students with an understanding of biological concepts and processes with the broader thinking skills and understanding of the nature of science.

An innovative teacher, Tina incorporates computer programs, Internet connections, and cooperative learning groups in her daily routine. She also works cooperatively with other department and school staff to improve student learning—making accommodations to ad-

dress the diverse learning styles of special-needs and at-risk students in her classes. Her instruction reflects freshness, meaning, and purpose. She is a dedicated professional who maintains constant involvement with various science education projects. Tina is frequently invited to host visiting educators from across the country who wish to observe model science classrooms. She also serves as a lead teacher and helps conduct numerous in-service projects with the University of Iowa.

EXCELLENCE IN SCIENCE TEACHING AWARD
Middle/Junior High

Nadine Weirather

Nadine feels fortunate to be a science teacher. She never dreamed she would be teaching science full time, but thinks it is the perfect job. She hopes every child leaves her class loving science and learning content they can apply in their lives. She works hard to make science interesting and fun, all the while earning the respect of her students and helping motivate them. For Nadine is confident that all kids

can learn. Her students at Central Lee Junior High School know what the learning objectives are and what they are expected to do in meeting those objectives. She teaches a "hands-on" discovery style of learning where students work independently or in small groups. They engage in research projects and keep their investigations in a journal where they record daily accomplishments and stumbling blocks and write goals for the next day. They also do plenty of reading from newspapers, magazines, and books. Nadine likes to begin by finding out what her students know already and what they are interested in investigating. She believes they are more inclined to see the importance of something if it is relevant to them.

Nadine works hard at becoming a better teacher. She is also active in her community and stays current with the science field by participating in workshops and attending meetings. She has the highest expectations of herself in her role, and she is excellent at judging what is working and what is not in her daily routines. She is dynamic, articulate, knowledgeable, and effective; her warm personality and genuine concern for all people has gained her many supporters. She is a superb teacher, a dedicated leader in science activities, a friend to students, and a great colleague.