AURORA HighLIGHTS

Vol. 2, No. 2 May, 2002 a newsletter for members of Aurora

Words from the Director

Gary Sacket

Another school year is coming to a close! Much has happened in Aurora this year with much more to come.

Over 25 ALCA Communities have been established, with each of them teaching all of us new, exciting ways to use the Community server. MANY more communities are planned for next year. In fact, next year is expected to be a period of exceptional growth for Aurora.

What do we do to prepare for that growth? It is essential that our Aurora curriculum developers complete their lessons this summer. Darleen and David Wright are a little over halfway finished with final editing of the lessons. If your lessons are not yet blue or green, please finish them as soon as possible. You all have done exceptional work with wonderful curriculum ideas. We are really anxious to see the lessons field tested this coming school year by you and other teachers and students in ALCA Communities across the country. The ability to conduct lessons and compare results among communities will be an exciting reality next year. Put this in your lesson plans for next year.

Version 1 of the ALCA Community server is coming out this summer. This version will have most, if not all, of the features you have requested through the years (and many more you didn't). We have great appreciation for your patience and feedback in the software development these last few years.

We are pursuing grants from NSF and other sources to help in continuing development and dissemination. This will help keep the cost as low as possible for ALCA member communities.

I encourage you to review the online efforts of our partner communities. Each community has its own needs to address, which results in unique applications of the Community server. It is an enlightening experience.

ALCA will have additional staff to facilitate expansion and to provide ongoing support this next year. We anticipate having a significant presence throughout Oklahoma. We will be supporting our Technology Innovation Challenge (TIC) grant partners in having the same impact in their own states as well.

Aurora Community Server Features

As a Web Server

- The Community server can be used simply to serve up a web site, with url links throughout, using bookmarks, *not* html code.

As a Project Server

- The Community server can serve up projects addressing authentically focused collaborative efforts on all types of research, writings, collections, maps, etc.

As an e-Learning Server

- The Community server can provide educational opportunities including K-16 courses, professional development workshops and seminars, the latest performance-based instruction, and classroom management tools, such as grade books, portfolios, calendars, etc.

As a Data Server

- The Community server can collect, process, and deliver data and forms, such as community surveys, administrative forms, evaluation instruments, curriculum data forms, environmental data, voting forms, etc.

As a Resource Server

- The Community server can be used as a web-based file or resource server for image files, multimedia content, Geography Information Systems files, all URL resources, and over fifteen spreadsheet/word processing/database files.

As a Collaboration Server

- The Community server can support feature-rich message boards and sharing of curricula and other resources across communities.

Partnerships forged in Aurora Learning Community

America 2000
Building upon existing connectivity between the Louisiana Department of Education and the Concordia and Catahoula Parish School Boards, America 2000 expands professional development to poor rural school districts in order to enhance student learning opportunities in real world applications of the new state content and performance standards. The project scales up existing electronic capabilities, including a collaboration with Aurora to establish technology-rich classrooms and interdisciplinary learning centers in 25 project schools.

Global Connections
This Phoenix, Arizona, project meets the needs of educators through intensive and sustained staff development programs at 3 progressive levels: ongoing technical and pedagogic support systems; university teacher preparation centers located on elementary and high school campuses; and the establishment of worldwide, electronically connected communities of learners (such as ALCA). It integrates technology into a K-12 curriculum that is aligned with Arizona's State Content Standards.

NatureShift!
The "NatureShift! Linking to Life" project of Grand Forks, North Dakota, emphasizes the creation and implementation of an innovative teaching and learning model. The model is based upon best practices from informal and formal education to enhance the use of technology in all educational settings. NatureShift's state partners include schools, libraries, state parks, and professional societies across North Dakota.

Oklahoma Achievement through Collaboration and Technology Support
The OK-ACTS partnership seeks to improve student achievement in Oklahoma by educating, connecting and supporting 800 Oklahoma principals and superintendents in integrating technology into schools in ways that provide meaningful, real-world student learning. OK ACTS members will use the ALCA hub to communicate among themselves and to facilitate the sharing of educational software and data.

Rural Education Learning (REL) Pioneer Telephone Cooperative
Pioneer provides fiber-optic distance learning, making it possible for schools to meet curriculum requirements, while providing expanded learning opportunities. Pioneer serves many rural and small-town school districts and is their link to the Aurora Learning Community Association.

San Antonio Technology in Education Consortium (SATEC)
SATEC is an alliance of several educational entities, which provide the resources to improve the mathematical skills of middle and high school students by incorporating the latest technological innovations into classroom instruction. Students make the connection between abstract mathematical concepts and concrete, real-world experiences through an outstanding curriculum that is shared via SATEC's ALCA community server.

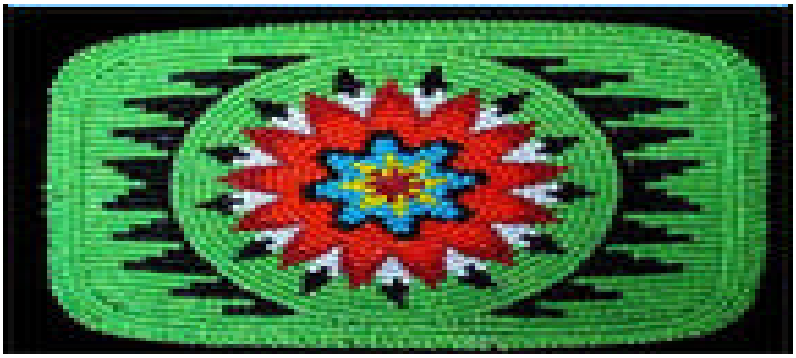
South Central Regional Technology in Education Clearinghouse(SCRTEC)
SCRTEC offers educators information, resources, and tools to support the construction of knowledge around the use of technology to increase student learning.

Usage Statistics for the ALCA Community Servers since January 1, 2002

Server	Specific Time Period	Pageviews Total	Pageviews Per Day	Visitors Total	Visitors Per Day
America 2000	03-13-02/04-13-02	4,714	174	52	2
AIRD	01-19-02/04-13-02	4,093	48	54	1
ALCA	03-20-02/04-12-02	45,301	1,887	533	47
Bishop McGuinness	01-29-02/04-11-02	1,290	17	78	1
Enid	01-29-02/04-12-02	221,484	2,993	1,076	30
Fairview	01-17-02/04-12-02	79,404	923	246	5
Frontier	01-29-02/04-07-02	4,942	71	31	1
Global Connections	03-13-02/03-18-02	310	51	7	1
Hugo	01-29-02/04-05-02	1,117	16	54	1
Jenks	01-29-02/04-12-02	5,336	150	46	1
Nature Shift	02-21-02/04-10-02	1,163	23	16	0
OK Historical Society	01-21-02/04-12-02	9,812	119	43	1
Oklahoma ACTS	04-05-02/04-12-02	4,287	535	41	6
Pryor	01-29-02/04-12-02	3,457	46	40	0
REL (Pioneer)	02-21-02/03-30-02	231	6	4	0
SATEC	01-17-02/04-11-02	6,148	72	61	1
SCRTEC	01-27-02/04-12-02	44,109	612	272	3
Sanger	01-29-02/04-12-02	13,180	156	52	1
SWOSU	01-29-02/04-12-02	27,590	328	284	6
USID	01-29-02/04-12-02	64,107	745	228	4
NWOSU	01-29-02/04-12-02	396,515	4,777	2,081	68
Totals		**938,590**	**13,749**	**5,299**	**180**
Means per Server		**44,695**	**655**	**252**	**9**

AIRD promotes education within communities

Community. The word conjures up pictures of a small town built around a town square, with kids bicycling down the street and playing hopscotch on the sidewalk.



However, numerous other types of communities exist, particularly in the world of technology. One of these is Aurora, a virtual learning community composed of countless other communities, one in particular being American Indian Research and Development (AIRD), Incorporated.

AIRD provides educational services and technological assistance to local and state educational agencies, as well as to institutions of higher education and tribes. AIRD's goal is to improve the quality of education for American Indian students, professionals, teachers, and other residents throughout Oklahoma and the rest of the nation.

Dr. William Bray, AIRD Director, says that trying to serve the needs of American Indians presents several geographical challenges.

"Everybody is diverse, some hours away from available resources," he said. " Some are isolated physically and others are isolated within a school – where you might have a majority of native students or you might just have one or two."

Bray said that AIRD professionals see the Internet as a way to reach those people who generally aren't reached, a way to bring those groups of people together to create "community," in much the same way that tribes bring people together.

"We looked at the Aurora Project, and it fit very well with a concept called the 'Indian Territory Knowledge Network'," he said. "It is a virtual tribal community where you have elders, professionals, parents, teachers, students – all interacting to provide the very best educational experience for students in a culturally relevant way."

Still, while acknowledging the importance of the Internet in education, Bray is cautious in his praise of it.

"The Internet should definitely not replace the strong interaction students should have with their parents and elders for cultural transmission," he said. "The Internet is just another tool, a very flexible tool, a large part of transferring information from generation to generation."

From a cultural standpoint, AIRD gains much by becoming a member of the Aurora Learning Community Association (ALCA), said Bray.

"We looked at Aurora and thought of developing cultural and tribal standards – what parents would like for students to know..."

"Aurora lessons address standards, things that teachers would like for their students to know," he explained. "We looked at Aurora and thought of developing cultural and tribal standards – what *parents* would like for students to know, the things parents think are essential for cultural strength."

Although the development of cultural/ tribal standards for lessons would be difficult, Bray says the standards could be interwoven with already established state and national educational standards.

"It (would be) an added burden for Indian students to have to know their tribal language, their traditions and culture…and many people would say, 'How do you teach that and cover math, science, English?' (But) we look at it as a value-added situation for these students to be bilingual and bicultural, to function in a variety of different worlds."

Training, online curriculum writing, and communication are the most important aspects of the AIRD/ALCA collaboration, Bray said, and AIRD needs Aurora to help get it all into place.

"We will be trying to (develop lessons) that are not exclusively for Native Americans. Take, for example, the concept of clowning in the theater. Look at that from a variety of perspectives. One might be the history of sacred clowns in the Indian culture, then from a contemporary, non-Indian perspective, maybe a South American perspective. The concept is applicable to all students."

Bray stresses authentic learning experiences, comparisons between tribes and traditions.

"We are looking at working on curriculum and teacher training for tribes throughout the country. Hopefully we will train people on the Aurora system so that they can collaborate no matter where they are. We can keep the Indian education professionals in Montana, Arizona, Oklahoma together, through the system."

Bray is optimistic. "Aurora seems to have a strong capacity for storage and sharing, a way to build community."

'Huge, Tremendous, Massive' -

Words used to describe Millennium/Aurora collaboration

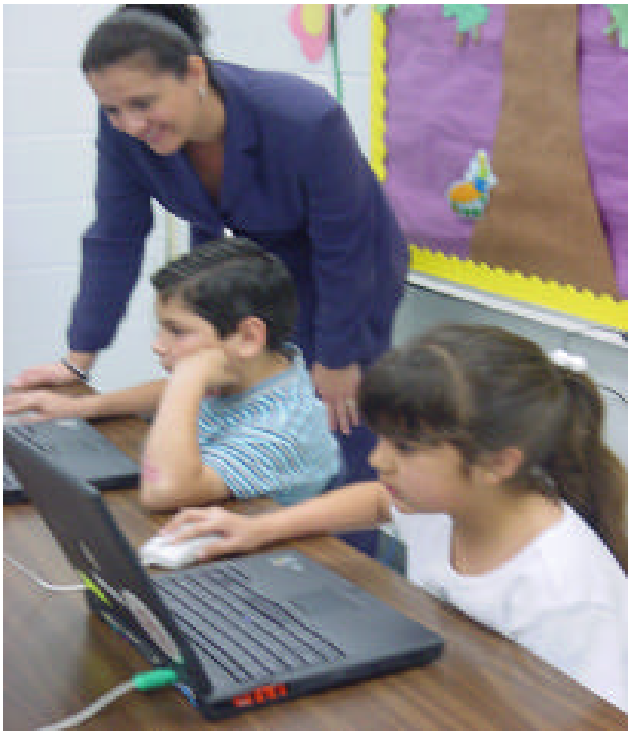
A huge grant for a large school district in a big state: Project Millennium, the Technology Innovation Challenge (TIC) grant funded in 1999 for almost $10 million, serves thirty campuses of the United Independent School District (UISD) of Laredo, Texas, covering 2,448 square miles, an area the size of the state of Delaware.

Pat Abrego, UISD Instructional Technology Coordinator, says Project Millennium has several key components: the development of kindergarten through eighth grade technology, an integrated curriculum, online courses, middle school distance learning programming, and the creation of a virtual finance classroom for high school students. Other components include classroom intervention, community involvement, performance-based assessments, university-based courses, and advanced training modules delivered via the Internet.

"During the first two years of the project," Abrego said, "we revised our science and social studies curriculum for our middle schools. By 'revised,' I mean we integrated technology applications – the essential elements – into the science/social studies curriculum." Thus, new technology standards were included in all lessons, even those on the elementary level.

"It was very hard to do," Abrego said, explaining the revision process, which entailed rewriting the curriculum, making copies of the lessons, and putting them into binders for distribution to the hundreds of teachers at the various school sites.

Then came a tremendous opportunity – the chance to go further with the "integration of technology component," a way to get the revised UISD curricula onto the Internet .



Students in Laredo, Texas are proud of the technology which is integrated into their curriculum, thanks to Project Millennium, and the efforts of educators such as Pat Abrego, above.

Project Millennium became a member of the Aurora Learning Community Association (ALCA), and UISD teachers suddenly had a vast audience with which to share resources.

"The first thing we did was start uploading lessons, using templates from Aurora," Abrego said.

"When we presented (Aurora) to the teachers, it was quite amazing how ideas came to mind."

Those templates, created by Aurora's web designers/software technicians, GammaStream Technologies, show such things as how to create lessons, data forms, and rubrics; how to attach resources; how to organize information; and how to use various technological features of the ALCA system.

The Millennium/ Aurora Project collaboration has proved to be a good one.

"When we presented (Aurora) to the teachers, it was quite amazing how ideas came to mind," Abrego said. "They were asking, 'Okay, once the lessons are up there, is there any way we can gather data on them – on a specific area such as science?' Their ideas are expanding and giving us ideas on where we want to go with the application."

Abrego noted that teachers weren't the only ones excited about having Project Millennium become a part of the ALCA community.

"The administration started asking, 'Oh, can I utilize this for surveys, to survey my teachers?' The applications are endless," Abrego noted.

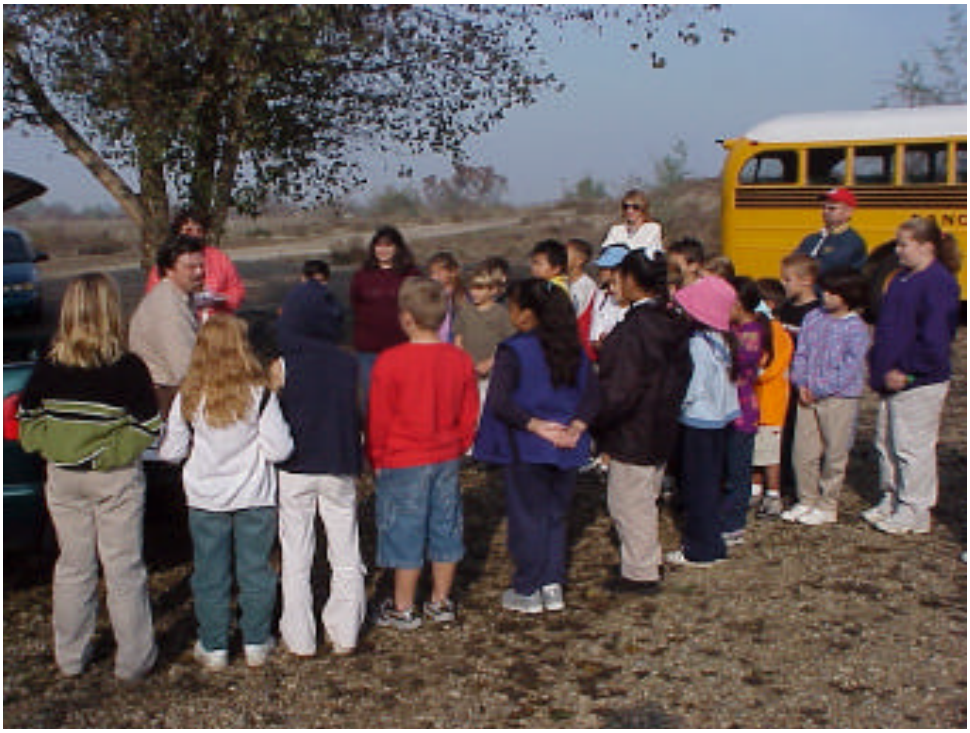
"Because of manpower – of what it takes to upload into the other (system), that is the only thing holding us back. We had a lot of handouts with lessons, so we had to do massive scanning and proofreading. Presently, three high school students are helping, and around 25 or 30 teachers are working directly on curriculum writing."

Abrego predicts good results from Millennium's collaboration with Aurora: "Once the word is out, this will be massive," she said.

Technology and Nature - Common Denominators of Projects

What do the towns of Sanger, California, and Fairview, Oklahoma, have in common? Technology in local schools, thanks to the Technology in Nature for Sanger (TINS) Project and the Aurora Project, two 1997 Technology Innovation Challenge (TIC) grant awardees.

Former middle school science teachers Mike Workman, of Sanger, and Gary Sacket, of Fairview, have both worked separately for over four years to bring their respective projects to fruition. Yet they have kept in contact and consulted each other several times, so an important connection exists.



Learning science proves to be much more relevant and exciting for Sanger, California, students, who get the chance to visit the Nature Center, as part of the Technology in Nature for Sanger (TINS Project). Above, Technology Coordinator Mike Workman gives instructions before a class begins the nature tour.

The TINS Project provides a linkage between a local nature area and technology to provide "real-world, real-time" school-to-career education in science and technology.

Similarly, technology is infused into the Aurora Project curriculum, which provides tools and activities covering all subject areas and grade levels, kindergarten through adult education. Additionally, much of the curricular emphasis has been on nature, especially in the area of science.

According to Workman, who now serves as Technology Support Person in Charge of Professional Development for the Sanger Unified School District, "We wanted to create a science curriculum with technology imbedded into it. The curriculum uses a nature center of about five acres that runs alongside the Kings River, which goes through the center of California. We have a trail there and lessons that involve kids going out with cameras and all types of technology to learn more about science."

The TINS Project involves a core group of about twenty teachers from grades 1 through 8, who field test the curriculum by taking classes to the nature center. Equipped with technical instruments and utilizing sensors located along the trail, teachers and students make observations and gather information, which they take back to their classrooms to study a variety of scientific processes and record changes over time. The gathered data are then used to develop multi-media presentations and worksheets that connect science to real-world learning.

Initially the project involved only three elementary schools – Del Ray, Lone Star, and Jackson – plus the science departments of Washington Academic Middle School and Sanger High School, but all 17 schools within the Sanger Unified School District are now involved and connected via modems.

Nevertheless, an even broader audience for curriculum/data sharing was the ultimate goal of Workman, who had communicated the idea to Sacket. Thus, after several meetings, TINS joined the Aurora Learning Community Association (ALCA) and established its own ALCA server.

The collaboration has been good for Sanger, Workman said, with teachers setting up their own web pages and using other on-line resources.

"The Aurora Project is giving TINS an opportunity to place our lessons online, in a central location, for other teachers to access and use," he said, noting that the best is yet to come as far as collaborative work is concerned. "We can take advantage of lessons that other Aurora community members have placed on their website, and they can see ours. It will do a great job of delivering quality lessons to kids. The power we will have for sharing will be so great that it will be hard to overlook."

Setting up classes, courses, message boards on ALCA server

The ALCA server is being widely used on at least two university campuses, Northwestern Oklahoma State University in Alva, and Southwestern Oklahoma State University in Weatherford.

NWOSU uses the ALCA server in countless ways, reports Dr. James Bowen, Dean of the School of Education.

"Our teachers are using the server to set up their course syllabi, especially in the teacher ed program," he said. "They are using it in their classes – to design and deliver their courses."

Bowen says that faculty and students are working together, sharing knowledge, which he describes as the basic concept of the Aurora Learning Community.

Kendall Humphrey, Teachnology Center Coordinator, agrees. Her job is to manage the Aurora system from the university's Teachnology Center.

"Our goal was to get technology to the professional education staff, then the subject area faculty, and then to the entire faculty," she said. "We've already surpassed our goals, and the faculty has accomplished multiple tasks."

Communicating with student teachers through the ALCA system is simple, says SWOSU professor, Dr. Don Wilson, who works not only with future teachers, but also with people who currently teach, including ALCA curriculum developers Marie Pool, from Clinton, and Pam McCaskey, from Ringwood.

One of those tasks involved effective communication, something that teachers strongly encourage, says Beverly Warden Assistant Professor of Education.

In all her education classes at NWOSU, Beverly Warden stresses educational standards. In this Foundations of Reading class, she instructs students to look over technology standards that are integrated into reading.

"We're very excited about the (ALCA) server," she said. "We created a 'Buddy List' so everyone could communicate with each other. In two of my classes I use the Message Board. Instead of trying to email my students personally, the students can just look at the message board."

The same concept is used at SWOSU. Dr. Don Wilson, professor of education, has his student teachers keep online journals to communicate with him while out in the "field" doing their teaching.

"We write back and forth, and the students learn a great deal from reading the comments of others," he said. "It's all very effective – a good way to communicate."

Additionally, other professors are using the server to create and modify lessons, set up classes and courses, and communicate with students.

Food for the Brain

What's being offered at Fairview & Enid?

At Fairview, Oklahoma's Chamberlain Middle School, hot dogs, hamburgers, pizzas, and salads aren't the only things served at lunch.

Chess is offered, too, for all those who want to play the game after a quick meal and before heading to fifth hour.

"There really isn't enough time to finish a game (in thirty minutes)," explained Principal Billy Sacket, about the chess interest that has sprung up as a noonday activity at the school. "I made up some sheets that look like a chess board, and the players write down where their (chess pieces) are located and who moves next. Then when they come in the next day, they can see where they left off and start from there.

Jesse and Josh are hard at work developing strategy (and critical thinking skills), while Taylor can be seen in the background doing the same thing.

Over 30 students in grades 6, 7, and 8 play the game, with tournaments significantly boosting the numbers. Sacket has put chess information on ALCA's Fairview Community server, including chess websites as bookmarkers so the students can go online to learn more about the game. They can even play chess online, if interested. However, the main focus at Chamberlain School has been in the tournaments, especially since one of the students competed with the high school chess team in a Tulsa tournament, at which Fairview brought home the first place trophy.

Sacket now posts the brackets on the school website, with daily updates. Plans were being made to have a checkers tournament, too, before the end of the school year. As with chess, interested students in each grade would play each other, with the final players from the three grades squaring off against each other to determine the school champion. Again, results would be posted daily for parents, friends, foes, and anyone else to view. They would simply access the ALCA site at (www.alcaweb.org), click on "search," type in "chess," check "other communities," and pick the file for the correct class.

"I've always thought that chess helps develop the brain," Sacket said. "It helps players use their memory and critical thinking skills."

Improving students' critical thinking skills is also the goal of Rob Camp, Algebra I and Advanced Plavcement Chemistry teacher at Enid High School. So committed is Camp to the goal, that he has created several assignments for next year's AP Chemistry students to complete over the summer.

"They won't have a textbook," he explained, "but they will use the Internet to fill out forms that have questions such as 'What is the atomic weight and the name of this compound?'… Then all that information will be online when school starts."

Camp keeps an online journal of classroom activities, telling how the kids use the ALCA server. Because he is a "portable teacher, moving from room to room for different classes, he can't put an assignment on the chalkboard. Instead, he puts assignments online, on what he calls the "homework hotline." Students who are absent can check it for notes, quizzes, and assignments missed.

Determined to be a winner, Amanda plans her moves very carefully during a tournament at her Fairview, Oklahoma, middle school.

"This helps the kids get more technology," he said, "and I know they are getting the assignment."

Camp has created an Aurora lesson on graphing, and plans to do more. He is especially interested in laboratory activities for finding such things as molecular formulas for compounds. He uses LabPro, a software program that produces graphs, which he likes to use for clarifying ideas.

"Students can't just look at numbers and see what's happening," he said. "This automatically produces a graph to copy and paste to their resource folder and attach to an assignment so other students can look at it."

Enid students *and* teachers like being part of the Aurora Learning Community. "As I talk to the teachers about what they can do for their classes online," Camp said, "I can just really see the energy…They're wanting to learn the system. They see so many aspects of it."

Aurora Calendar

May 29 - 31 - Aurora Evaluation
June 3 - 7 - "Train the Trainers" Workshop
July 8 - 12 - "Train theTrainers" Workshop
July 23 - Aurora Board Meeting
August 5 - 9 - "Train the Trainers" Workshop
August 27 - Aurora Board Meeting

Meetings are at Bishop McGuinness High School in Oklahoma City, unless otherwise listed.

Gary Sacket, Project Director
Fairview Public Schools
1000 East Elm
Fairview, Oklahoma 73737
gsacket@www3.auroraok.org

Aurora's curriculum is on the Web.
http://www.alcaweb.org

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Director – Gary Sacket
Administrative Assistants –
Penny Payne and Tammy Price
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Dr. Don Wilson
The Aurora Project
Southwestern Oklahoma State University
100 Campus Drive
Weatherford OK 73096-3098

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