Teamwork is the Key to a Successful Education Program

article and photos by Koy Coffer

Five years ago, Brenham Independent School District tried something new in their seventh-grade science classroom. It heard about the TWA youth education program L.A.N.D.S. (Learning Across New Dimensions in Science) and decided its students deserved the opportunity to learn about Texas natural resources, wildlife, water, conservation and the importance of being a good land steward. It also liked the idea that students would meet many of its local natural-resource professionals and learn about other educational programs and activities.

Teachers were trained on the L.A.N.D.S. curricula by attending an intensive workshop, which included indoor and outdoor class lessons and activities. All lessons are TEKS aligned and geared for the seventh grade. Included are soils, eco-regions, habitat 101, animal adaptations, flight physics, dichotomous keys, plant identification, land ethics, critical thinking, and how to design an experiment. After training, teachers took the material back to their classroom and began inserting it into existing curricula.

While studying the curricula, which includes bobwhite quail and their habitat, students had the chance to learn first-hand about digestive systems by participating in a quail necropsy. To further learn about quail and their habitat, students went on a field investigations day to a local park. There, they studied plants, soils, rainwater, predator/prey relationships, tracks, radio telemetry, prescribed burns and the importance of being a good land steward. Many sessions were lead by local and regional TWA partners who are natural-resource professionals: a veterinarian, college professor, rancher, wildlife biologist, county extension agent, master naturalist, and soil and range scientists.

Like any other quality program, an assessment was done at the end of the year to see how effective it was and if TAKS scores had been raised from the previous years. Nancy Oertli (Brenham I.S.D. Science Curriculum Specialist) said, "...in 2009, 91 percent of the eighth graders passed the Science TAKS. That is quite an accomplishment and shows great progress in the years since L.A.N.D.S. was first implemented."

TWA Director Karla Welch helps students look for predator/prey tracks.

Since the program worked so well for seventh graders, Brenham added a new chapter to L.A.N.D.S. for their eighth grade. Along with other topics, they now study white-tailed deer, which includes a day in the lab to study organs and a field investigations day where they learn about habitat, deer parts, reproductive cycle, gestation and the importance of properly managing deer.

While visiting with Brenham teachers and volunteers about the L.A.N.D.S. project, I asked them to answer several questions:

Why is a program like L.A.N.D.S. so important in schools?

Dr. Bill Eikenhorst (veterinarian): *L.A.N.D.S. fosters an engaged learning environment. Everyone, especially young people, learns better when lessons are fun and they are able to relate to real circumstances, rather than abstract concepts. L.A.N.D.S. is energizing to all involved in the circle of learning: students, parents, teachers and administrators are engaged and interested. In addition, it enhances the academic environment and ecologic literacy of all stakeholders and helps the community as a whole become smarter, healthier and a more sustainable habitat for animals and people.*

Vicki Jordan (teacher at BJH.): *It puts the students in the great outdoors with people who make it come alive. It shows students how different groups of professionals can come across boundaries to help educate them about their environment.*

Veronica O'Donnell (NRCS): *These students are the people who will be asked to give consideration for our open spaces and wildlife. If they don't have at least an appreciation for nature, they will not have a desire to protect those things we value so much. L.A.N.D.S. teaches students that the world expands beyond the four walls of their home and schools, and they are responsible for that world. I believe in some ways L.A.N.D.S. helps teach students another way of thinking through the development of a different set of life skills.*

What two things do you think are most important for students to take from this program?

Larry Pierce (AgriLife Extension): *A better understanding of the biology and habitat of key wildlife species and enthu-*

TWA volunteers watching L.A.N.D.S. Field Investigations Day wrap up.

TWA Life Member Dr. Bill Eikenhorst explains deer digestive systems as Ms. Jordan and students listen.

Allison Bentke watches as her students dissect deer organs.

siasm about science, math, reading, writing and school.

Allison Bentke (teacher at BJH): *Interdependence of life is the most important thing to understand.*

Dr. Eikenhorst: *Learning through exploration and discovery is fun and easy. Activities do not have to be digital or electronic to be exciting and meaningful.*

O'Donnell: *The ability to problem solve on their own and self confidence.*

Why do you enjoy helping as a volunteer/instructor?

Jordan: *It allows me to point out a variety of job opportunities in the science field.*

O'Donnell: *I enjoy sharing my passion; I love to watch students have an "Eureka!" moment.*

Dr. Eikenhorst: *The ability to make a meaningful difference in the lives of children, their families and my community by sharing my passion for wild things and places has changed my life immeasurably.*

It takes a team to make L.A.N.D.S. work. What can you offer other schools just starting out?

Jordan: *First and foremost, you must have the support of your campus administration. Get local people involved and have them to talk to the school board and central office administrators.*

Pierce: *You need to develop relationships with all of the key natural-resource educators in the community, so they can lead you to master volunteers, private business owners, and other support groups.*

Dr. Eikenhorst: *Visit a L.A.N.D.S. event. Feel the passion and energy of those involved. Ask lots of questions. Get involved. Be prepared to become an indentured servant to the program.*

Has Brenham benefited from natural-resource professionals working together?

O'Donnell: *Definitely! Because of L.A.N.D.S., we have come to rely on each other for support and assistance in other projects.*

Bentke: *I see more kids involved in wildlife issues, and I think even more will be involved in years to come.*

Jordan: *More young people are applying for Brigades camps (girls, as well as boys).*

Is there anything that will help make the program stronger?

Pierce: *Involving and training new volunteers is always important, keeps things fresh and new. Having local Texas Brigade cadets help makes a huge impact on middle school students.*

Dr. Eikenhorst: *Build on what we have started; enhance and broaden TWA's regional development.*

As you can tell, Brenham I.S.D. and local natural resource professionals work together as a team. Like Nancy Oertli said, "Brenham I.S.D. is grateful to the Texas Wildlife Association for its support of science in the public schools and their innovative approach to teaching students."