

# tele mentor™

*journal of the international telementor program*

**The  
3,000  
Acre  
Classroom**

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**Collaborating  
with  
Mentor  
Experts**

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**Why My  
Students Love  
AUTHENTIC  
learning**

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**Writing for  
Impact:  
Making a  
Difference**



## **GETTING WILD!**

**How students at Preston Middle School in  
Fort Collins, Colo., are digging in to  
science with some surprising results...**

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**WHY ACADEMIC MENTORING WORKS**

## Collaborating with Mentor Experts



**Natural Resources.** Zac Wiebe brings his rich experiences as a mentor to students participating in the Colorado Wildlife Research project at Preston Middle School.

THIS SPECIAL ISSUE OF OUR journal is all about getting wild, as in, *understanding what it means to move beyond the typical*. In this issue, you'll hear from teachers, mentors and students about the value and benefit of project-based learning that utilizes the power that a solid mentor can bring to the table. One such mentor is Zac Wiebe, a Natural Resources Technician for Larimer County, Colo., whose job is to monitor conservation easements, including those at Sylvan Dale Guest Ranch where Preston Middle School students have been conducting research. "It has been an absolute pleasure to serve as a mentor for the Preston Middle School Wildlife Research Project at Sylvan Dale Guest Ranch this year," said Zac. "My organization has worked with Sylvan Dale for many years to conserve wildlife habitat and natural resource values

on the property and this project has taken those efforts a step further. Not only does it directly improve habitats for a variety of wildlife, it incorporates an educational component intended to teach real-world biological science and outreach. Educating our youth about the importance of this type of work will hopefully instill an appreciation and wonder about the natural world, deepening students' connections to nature and their dedication to protecting it in the future," he said.

"I particularly appreciate the well-rounded nature of the project. It began with initial planning, then implementation, and finally dissemination of the information for the public through presentations and a website. Rather than simply teaching facts about ecology, this process mimics real-world situations and incorporates steps that, while just as important, most students may not otherwise associate with learning about science. Offering this 'real-world' experience has no doubt been incredibly valuable to the students and I'm proud that I was able to contribute to it."

We appreciate Zac's role as a mentor and project expert. Validating all student action through collaboration with project experts makes it more real, more wild, and more important to the students. Zac, along with all the mentors, are greatly appreciated and critical to authentic learning. Thanks Zac!

For Youth,

*David*

David Neils,  
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Amy Schmer  
and her students

a special thanks to  
Sylvan Dale Guest Ranch  
in Loveland, CO

The International Telementor Program (ITP) facilitates electronic mentoring relationships between professional adults and students worldwide, and is recognized as the leader in the field of academic based mentoring. Since 1995 over 40,000 students throughout nine countries have received support, encouragement, and professional guidance. ITP serves students in K-12 and home school environments as well as college and university settings.

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## Project Summary

### 3,000 Acre Classroom: Sylvan Dale Guest Ranch

STUDENTS AT PRESTON MIDDLE school work on a project at Sylvan Dale Guest Ranch to improve wildlife habitat, learn scientific inquiry, explore web resources and through the process they experience what it means to produce quality work. They've created a guzzler "watering hole" from which animals drink; a motion-activated camera captures activity there. A natural spring up the trail and kestrel nesting boxes also have cameras. For 9 months, they're immersed in applied science and math, solving problems related to the site. "All action taken by students is dependent on successful collaboration with mentors and project experts. No student moves forward in isolation and shooting from the hip regarding quality," said Neils. "Quality and purpose are driven through this professional, collaborative network. At the center is Amy Schmer, a teacher who was willing to step away from the textbook and provide a life-changing opportunity for her students. Without a student-centered teacher, none of this is possible," said Neils. Resident naturalist Dave Armstrong spoke with David Neils about what the students have brought to the ranch. "David Neils has hiked and observed wildlife on Sylvan Dale Guest Ranch for a number of years," said Armstrong. "Over time, he has increasingly used automatic cameras to document the presence of animals—mostly mammals and especially mountain lions and black bears—along Sulzer Gulch, an intermittent drainage at the base of Green Ridge. Information provided has been invaluable as we share the natural wonders of Sylvan Dale with guests," Armstrong said, explaining that Neils has also stimulated and helped with wildlife research on the ranch by several Division of Wildlife

biologists. Over the past couple of years, Armstrong said that Neils has ramped up participation of students from Preston Middle School; students installed a wildlife "guzzler" to provide a reliable source of water near the Gulch. "The diversity of animals photographed has been remarkable," said Armstrong, "from native mice, pack rats, and rock squirrels to coyotes, bears, mountain lions, and even a river otter! Working with their 'telementors'—students have been involved in the design, construction, operation, and monitoring of the guzzler. As they worked through the process, their problem-solving skills and their sense for critical experiments were remarkable. *How to prevent the water from freezing? How to allow wildlife in but keep cows out? Will bats use this water source?* Beyond the guzzler, students also have built and installed nest boxes for bluebirds and kestrels," Armstrong explains. "David's work is compatible with and helpful to Sylvan Dale Guest Ranch in several ways. First, it helps us fulfill our goal, 'to share the beauty of Sylvan Dale with others'—by expanding our audience and providing insights that we can share. Second, it helps with ongoing management of these lands, which are protected by perpetual conservation easements. Third, it contributes to the goals of Maurice and 'Tillie' Jessup, 'Greatest Generation' founders of this family business, who envisioned Sylvan Dale as a place for education *from cradle to grave.*"

“ This is a one-of-a-kind opportunity for my students.”

—AMY SCHMER, TEACHER AT  
PRESTON MIDDLE SCHOOL IN FORT  
COLLINS, COLORADO

### SETTING THE SCENE



### Sylvan Dale Guest Ranch in Loveland, Colorado

*Embracing history, a western lifestyle and old-fashioned fun*

HOWDY, PARTNER! THE MISSION of this 3,200-acre working horse and cattle ranch in the Rocky Mountain Foothills an hour northwest of Denver is to create memorable experiences for others by sharing the beauty of Sylvan Dale—the natural surroundings, western heritage, people and services. With nearly 60 staff, the year-round destination offers vacations, receptions, retreats, reunions, outings and other events. Guests enjoy horseback riding, casting their line in the sparkling waters of Big Thompson, trap shooting, moving cattle, or an old-fashioned campfire among many other activities—all while protecting open lands through conservation easements and programs.

Check it out at:  
[www.sylvandale.com](http://www.sylvandale.com)

Preston students are...

# GETTING WILD!

Middle school science research takes a fascinating turn

BY VICTOR RIVERO



**Howler on the trail.** *This coyote is one of more than half a dozen different kinds of wildlife seen along a trail near a guzzler set up by Preston Middle School students as part of an unforgettable science project.*

AMY SCHMER HAS never seen her class quite like this. Amy is a sixth-grade science teacher at Preston Middle School in Fort Collins, Colo., where she and her students are participating in a unique wildlife research project in conjunction with nearby Sylvan Dale Guest Ranch, an historic working horse and cattle ranch in Loveland. David Neils, director of the International Telementor Program, an academic project-based mentoring program that matches students with real-world



**Digging in.** *Middle school students in Amy Schmer's class tend to a wildlife guzzler they built on the Sylvan Dale Guest Ranch near their school. Various wildlife have benefited from a cool drink, while students safely record data by way of motion-triggered cameras.*

professionals, arranged for the multi-year, project-based association to take place between the school and the ranch. How did he do it? He simply asked the ranch owners and they said yes.

"We now have 3,000+ acres on which to conduct science research," said David. "This is a dream come true for me. I've been looking for an opportunity where students are tackling real wildlife issues, improving wildlife habitat, and collaborating with real professionals every step of the way. That dream is now a reality thanks to the ranch owners and many others who have stepped up to the plate."

Sixth graders were literally swinging pick axes and setting up fixed movement-triggered cameras to document their studies. A few weeks later they already had their first thirsty visitor.

When David visits the classroom, he said, there are never less than five hands in the air at a time. "It's electric," he said. "Students thrive when they're learning math and science in a way that makes a difference. This kind of learning will be something they remember for the rest of their lives." >>





**A closer look.** Zeb, a Preston Middle School student, inspects an artificial scentpost that he built on a trail at Sylvan Dale Guest Ranch. The rockpile acts to slow animals down and lure them into a better photo opp in front of the motion-sensitive, heat-triggered camera fixed to a tree, the same camera that recognized Zeb's heat and motion to take the above shot.

From a teacher's perspective, Amy's class is working on real science projects in collaboration with professionals in the workplace who are mentoring them through the secure, web-based messaging system provided through the International Telementor Program. Students are getting help beyond their teacher and their parents from concerned professionals who are listening to what they have to say and guiding them forward in more depth than possible through the usual route. Sounds great, but what do the students themselves have to say about all of this? Let's just say, they're loving it every step of the trail.

"Our purpose is to spread the word on how the telementoring program and the mentors have

been helping us with our wildlife project, based on a guzzler that is giving many animals a source of water that is close by," said one student, Maggie. "Our mentors have been helping us with our project and giving us many good answers and help to use for up at the guzzler and for a further project in either seventh or eighth grade." She said that the mentors have really helped them to learn about nature and science. "Our mentors help us like when we need an answer to a certain question they can sometimes give it to us or when we need a link to a website animals, they can always provide their help." Mentors also provide advice when students give them their points of view on what they should do to help



the guzzler and for what they need to take away from the guzzler, according to Maggie. “Our guzzler is big enough for bears and has an escape ramp for smaller animals like birds, or field mice. Since the beginning of the year, we have worked very hard on giving these animals a good source of water. We have a lot of fun working on this project and it has been good to the animals up at Sylvan Dale Guest Ranch.”



**Breaking new ground.** Students in Amy Schmer’s class take turns doing some heavy digging as they set up a science experiment that will lead them to unprecedented data about local wildlife.

A pair of students, Sarah and Kiley, are also very excited about their work on the project. “Our class has been working on improving wildlife habitat at Sylvan Dale Guest Ranch, including, water, food, and shelter,” said Sarah. “Our class’s main goals are to learn more and help them, too,” adds Kiley. “This great opportunity is

worthwhile and better than anything that we could ever learn in the classroom,” Kiley said. “The first thing we did was to make sure they have is water,” said Sarah. “We have installed a guzzler so that the animals would not have to walk so far to get water. We

are always making adjustments. The ditch is not a good way for the animals to get water because they could drown.”

Kiley said that the second thing that was on their agenda was to “make sure that the animals had the right food



**Thirsty visitor.** A bear comes forth, enjoys a refreshing midnight drink, and begins to wander off. Students in Amy Schmer’s class at Preston Middle School in Fort Collins, Colo., have enjoyed many more visitors than they ever imagined would come to the guzzler they constructed in daylight hours. Motion-activated cameras keep the students connected to and documenting activity at the site.



## Preston Middle School Students!



**Is that you, deer?** From motion-activated cameras that Preston Middle School students set up as part of their science class, one can witness a near traffic-jam of various wildlife moving through the area, including mountain lions, bobcats, bears, and more. **BELOW:** A middle school student takes a short break from the activities on a dig day.

included in their diet by researching native and non-native plants and removing harmful or invasive species of plants to make sure that the animals are not harmed by any poisonous plants from other states, country, or continent.”

Sarah added, “The last thing we need to make sure is available to the animals is shelter.” For example, students have built bird boxes for animals. “Our class has done a lot of research on birds and has brought in some experts to make sure we are doing it right,” Kiley said. “We spread the boxes out and have built accordingly to our instructions. Our classes

goal is to help the environment so we wanted to make sure we did it right the first time.” Different animals mean different shelters, “So make sure you research first,” Kiley said. “This class has helped, and we have learned from this to continue to help the environment,” Sarah adds.

Another pair of students, Kyle and Reece, are also working hard in the class, and having a lot of fun while learning more than ever. “In Mrs. Schmer’s 8th period class we have been working on a wildlife improvement project,” explains Reece. “This project is taking place at Sylvan Dale Guest Ranch. The four aspects of the

project are Food, Water, Shelter, and a place to rear young,” said Kyle. “We’re trying to find and apply a solution to each aspect. For the water aspect or problem we installed a guzzler. You may ask what a guzzler is—it’s a black Rubbermaid tub. Around it, it has fencing to keep unwanted domestic animals out—cattle and horses,” said Kyle. “Also, you may wonder how we kept it unfrozen in the winter,” said Reece. “We used an aerator that ran on a solar panel. Now the aerator keeps the guzzler unfrozen and open to the animals. It only creates a small amount of bubbles. It also moves the water so it doesn’t get stale.”

(continued on page 9)





BY AMY SCHMER

# Why My Students Love **Authentic** Learning

Middle school science class has never been more fun. Here's a behind-the-scenes look at how academic, project-based mentoring has played a special role.

WE INTERVIEWED AMY SCHMER to find out her thoughts about the value of academic mentoring and project-based learning. Turns out, mentoring is *vital*. Here's what she has to say about it.

**Telementor: How'd you hear about the program?**

Amy: I heard about the program while teaching a class with David Neils [David is the Founder and Director of the International Telementor Program].

**TM: What prompted you to get involved?**

Amy: I knew that this was a one-of-a-kind opportunity for me and my students. I knew that I wanted my students to do something special and this was what I was looking for.

**TM: How does it support your teaching goals?**

Amy: One of my goals was for my science students to do more writing, and they are doing a ton of writing in Science class. They are also hearing from their mentors that it does not matter what

area you go into after school, you will have to know how to read and write.

**TM: What have been the value and benefits of the program for you/your students?**

Amy: The mentors. The mentors give so much time to my students that I could not give them. The students are learning about collaboration and time management. When I ask that an assignment be looked at twice by your mentor before turning it in, the 6th graders know that they need to manage their time wisely. They cannot wait until the last second for their mentor to give them feedback. This is a piece of information that I could not teach without this program. Also, my students now have connections outside of Preston in a field that they are highly involved in.

**TM: What are some highlights in working with the mentoring program/mentors?**

Amy: I have many

highlights....The feedback the mentors give is amazing. The time the mentors give is astounding. The quality of the messages that the mentors write is wonderful. It really gives the students an example that writing and communicating after their school years is still important. The mentors really take the time to get to know their student. I get many emails from mentors asking about their student. How they are, how can they help them, are they staying on task, and many, many more questions.

**TM: What are your thoughts on education these days?**

Amy: I know that the students at Preston Middle School are getting to do things that I never got to do even in college. The students at Preston are working very hard and love coming to school. With the mentoring program, I have felt supported all the way! ■





## NOTES FROM THE TRAIL

“ Today I will tell you about our unexpected guzzler visitors. The first guests were a nice surprise: a small family of bears—a mother and her two cubs. One of the mountain lions that visited had a tag on its ear. We wondered how far they had traveled. Did they live close? Were humans taking more and more of their territory? Don't they have water nearby, or is the guzzler their only source of water? Another unexpected guest was a river otter. How did it get there? It probably swam through the Big Thompson drainage system; we know it didn't walk because its fur was wet in the pictures. We haven't seen it since. We saw bobcats on the trail but not by the guzzler. One left its scent on a pile of rocks. No deer or Big Horn sheep. Why haven't they shown up? We never expected so many guests, and we hope to see many more!”

—MAKENZIE & CLAIRE,  
STUDENTS, PRESTON MIDDLE  
SCHOOL, FORT COLLINS,  
COLORADO

**Who is that?** *This interesting character showed up late one night to see what was happening at the infamous Preston Middle School guzzler on Sylvan Dale Guest Ranch in Loveland, Colorado. Students in Amy Schmer's class have been hard at work collecting information on wildlife in the region, and plan to continue their relationship with the working cattle ranch in years to come.*

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Said Kyle: “If you thought the water wasn't enough, well, then

**“It's electric!  
This kind of  
learning will be  
something  
they remember  
for the rest of  
their lives.”**

—David Neils, FOUNDER OF  
THE INTERNATIONAL  
TELEMENTOR PROGRAM

we also are going to plant forage plants to provide food to the animals at Sylvan Dale. This aspect is one of the two that are not going to get completed this school year. Also, Dave Armstrong, Sylvan Dale's naturalist, helped us with which plants we should look at planting. Now finally we are working on a place to rear young for Kestrels, Bluebirds, and Screech Owls,” Kyle said. “We've been building nesting boxes and we are starting to put them up at Sylvan Dale. Also we already have Kestrels Nesting in one box,” said Reece. “For the shelter, that is going to be another one of next years projects,” Kyle said. ■

DURING THE COURSE of their Colorado Wildlife Research project, students in Amy Schmer's class at Preston Middle School benefited from the guidance of mentors provided through the International Telementor Program. This was a vital component in providing her students in-depth, authentic learning experiences, something Amy said could not have happened without those mentors. Here, as a typical example, one of Amy's students corresponds with his mentor over the course of a few days. The detail, thought and depth of learning that transpires is quite stunning.

**Sender:** Mentor

**Subject:** Mentor Message from Zoe

Hi Tyler, You are doing a great job investigating all your options. I like how you are researching and thinking through the consequences of each possibility. That is just how real scientists do their work and real people solve problems. It's a little "messy" during the part when you aren't sure what the best solution will be, but keep investigating, testing and exploring and the right solution will be clearer. When you decide on a way forward, you will know that you choose the right thing because you did the work investigating many options. I'm glad my suggestions for the website were helpful. I'm excited to see what you come up with.

Keep in touch and keep up the good work-  
Zoe

**Sender:** Student

**Subject:** Student Message from Tyler

Dear Zoe, I've been thinking about the guzzler. I have concluded that I should list all of my ideas. When I join with other people who want to work on this we will combine our ideas and make a GREAT idea. Here are my ideas:

1. Fish tank heater powered by a solar panel

Problems: Fish tank heater may not be built for cold weather. Solar panels don't work at night. We would need a "battery bank" or another source of energy.

2. Solar panel boiling water in the day, concealed in something that will keep heat during the night (I know students who might be good at that), and pouring it in when the water is 32 degrees or below.

Problems: Water may not stay hot all night long. It also may not be able to keep the water warm for long enough.

3. Football in guzzler.

Problems: I'm pretty sure this is just to keep a hole in the guzzler. By moving the football the ice will break; this is a solution for cattle may not be such a good solution for the guzzler.

4. (this probably won't work) 4 springs, one basketball, 4 metal rods. 4 metal rods outlining a

**“I think you are thinking through the options and the possible problems/consequences really well. Great job!”**

—Zoe, MENTOR TO TYLER

place for the ball. When the ball pushes one spring it will trigger the other making it bounce to the bottom (visa versa). This will keep the water moving. The top springs would have to be stronger than the bottom. May not even need the bottom.

Problems: The ball may not be able to keep moving.

5. (this is more of just an addition to help) Insulation. A box retaining heat in the middle (animals drink from the side) with two holes for water to pour on the perimeter. Inside this box it will be made to keep heat so that the water in the middle stays warmer. Harder to freeze.

Problems: May look suspicious to animals (this one especially but it sort of goes for all of them). There may be no way around that. For the website I have to start it this weekend. Once I start it to show to my peers I will have much more to talk about. ■





BY CAMERON SHINN

## Writing for Impact: **Making a Difference**

Focusing on real needs within their community, my students are writing with purpose and passion.

THE COLORADO WILDLIFE research project featured in this journal issue is just one of many projects at Preston Middle School in Fort Collins, Colo., made possible through the International Telementor Program. Another project, Writing for Impact: Making a Difference, in English teacher Cameron Shinn's class, is also generating excitement. Here's what Cameron has to say about it:

This has been one of the best opportunities for students that I have been around. I have seen students who normally focus on just getting the work "done", now energized to do their best. I am seeing "best" on a frequent basis from almost all of my students. I see a new energy, an urgency from my students in this project. I even have students who worked on this project over spring break not because they had to, but because they wanted to work on it because, to them, it was fun. It feels

personal and relevant to them. I see students like Tom who are problem solving, where normally he always asked what do to, rather than think for himself. I am seeing

**"My students aren't waiting for the world to change, they are going out and being the change they want to see in this world."**

students like Sue, who never turn in work, ask for the next step because she is trying to work ahead. I am seeing students like Ellen who are mentoring other students because she feels confident in herself and what she knows. I am seeing students like Adam who might actually,

with the help of his contacts, get a camp for kids with disabilities up and running this summer. My students aren't waiting for the world to change, they are going out and being the change they want to see in this world. Also, every single one of my students can tell you the purpose and audience for their work. My students also can tell you why quality is important, and what they need to do, and are doing, to improve. We have had conversations about where they want their work to be, where it is, and where it should be. We have also talked about how they know if their work is successful, and what happens after they receive a grade. My students are thinking about what is next, not just about a grade. In short, this work is a road diverging in a yellow wood. They know which path to choose, they know why, and that will be the difference. ■

## Lasting Impressions

### **Authentic Learning, Real Results.**

*Students in Amy Schmer's Science Class at Preston Middle School in Fort Collins, Colo., have learned a valuable lesson about authentic learning that they will carry with them for the rest of their lives. As part of their Colorado Wildlife Research Project, they have not only built a guzzler for regional wildlife, but they've recorded their data—and changed their views on science research forever.*



## **Join our *Winning Team* of Mentor Organizations!**

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