



Teams of REALMS students measure stream health by classifying aquatic invertebrates into groups based on their pollution tolerance levels.

## A Standards Movement in the Spirit of Expeditionary Learning

By Roger White

**O**N THE BANKS OF TUMALO CREEK OUTSIDE OF BEND, OREGON, Sarah and her teammates extract and identify macro-invertebrates in a tub of water. Their classmates stretch a measuring tape along the bank of the river as they prepare to measure vegetation growth. These eighth-graders have been monitoring the health of the Tumalo Creek watershed for over five years, sampling and testing water quality, and planting and monitoring the growth of streamside vegetation. Like all students at REALMS Charter School, they are engaged in long-term intensive fieldwork, collaborating with local professionals as they build their understanding of and connection to our “home waters.”

REALMS has always prided itself on creating strong fieldwork projects in which students are involved in authentic, ongoing studies of local habitats. These kinds of projects were central to our school’s founding mission, and over time they have become the driver of much of our curriculum. We engage students in the hands-on work that professionals in the field engage in, knowing that these kinds of authentic projects lend themselves to high-level learning.

However, unlike many schools, the starting place for our planning has always been the fieldwork, rather than the grade-level curriculum standards. We have always approached curriculum development by first thinking about what kind of

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### EXPEDITIONARY LEARNING

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### Welcome to Signpost

*Signpost* is Expeditionary Learning's newsletter devoted to lifting up the good work and best practices from our network of EL schools. The theme of this issue is "Deeper Learning through the Common Core," a topic that marries EL's deeply held beliefs around curriculum and pedagogy with the new standards permeating our schools. We feature Roger White, the director of REALMS, a middle school in Bend, Oregon, who shares his reflections on how the Common Core standards support quality learning expeditions. Jessica Kauffman, a sixth-grade science teacher at Tapestry Charter School in Buffalo, New York, shares the Common Core literacy practices that have deepened her teaching and helped her students become more engaged readers. And principal Laurie Godwin talks with EL's director of curriculum about the Common Core as a tool to close the achievement gap at Tollgate Elementary School in Aurora, Colorado.

We hope you'll add your voice to upcoming issues. To find out more, please contact Lili Brown at [lbrown@elschools.org](mailto:lbrown@elschools.org).

An article about my school in Bend. The projects highlighted were completed with the guidance and support of the Upper Deschutes Watershed Council. This publication is the national publication of EL schools.

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real work our students would be doing in the field, and then moved to the content and skills they would need to understand in order to complete that work. Over time, the teachers at REALMS have wrapped these field-work projects in rich lessons designed to help students build background knowledge, make sense of the data they

curriculum around the standards because they support the kind of work that we believe is best for kids. The standards give us a nationwide directive that encourages us to go deep, not wide, moving us beyond memorization and toward meaningful application. Finally we have a standards movement in keeping with the spirit of EL.

**“We engage students in the hands-on work that professionals in the field engage in, knowing that these kinds of authentic projects lend themselves to high-level learning.”**

—ROGER WHITE

are collecting, and then communicate their new knowledge to the larger community in the hopes of making a difference. What started as “science projects” has evolved into interdisciplinary expeditions where middle school teachers of science, art, math, and humanities collaborate to develop rich curriculum that bridges the gap between the classroom and community. Despite the richness of these experiences for our students, the process for us was in many ways backwards—we develop the fieldwork and then surround it with curriculum.

### **Responding to the Common Core**

The transition to the Common Core State Standards (CCSS) has changed things for us. We can now build our

At REALMS, we have always taught students how to work in collaborative groups to solve problems. We have always looked for ways that students can apply their classroom learning to real-world problems. Now as we weave

**Common Core standards into our existing curriculum, including the instructional shifts required in literacy and math, we realize that there is great synergy between what we have built as an EL school—with our focus on fieldwork—and what we must build as we prepare our students to be college and career ready.**

**Developing high-quality fieldwork projects, connecting students with experts, building background knowledge, and finding audiences and authentic opportunities for students to “make a**

## **Our Checklist for Aligning to the Common Core at REALMS**

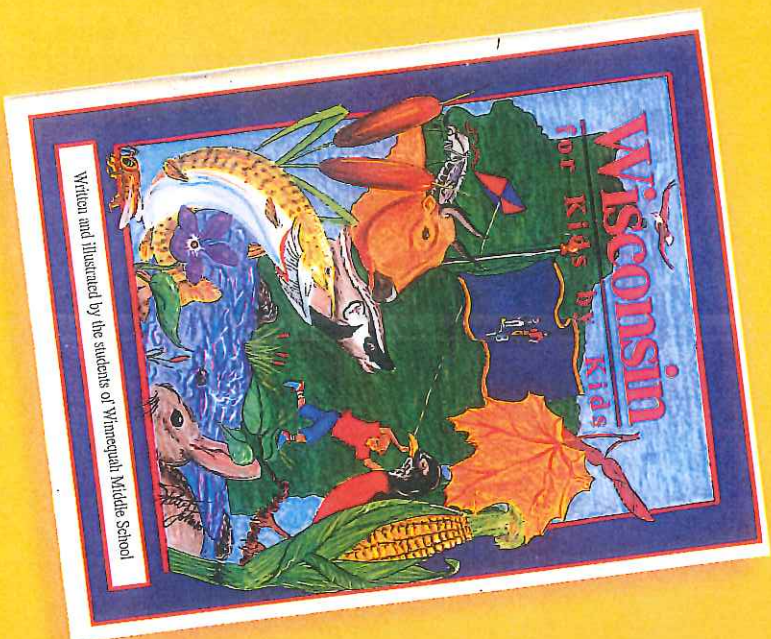
- Inventory complexity levels of existing texts used during lessons; support science and math teachers to find complex and compelling informational texts for all fieldwork projects and learning expeditions.
- Refine the “inquiry questions” driving each fieldwork project so that students must gather, analyze, and cite evidence from various sources, including scientific texts and field data, to find answers.
- Ensure that requirements for culminating products after long-term field studies call for students to “write with sources,” both to inform and to support claims with valid reasoning and reliable sources of evidence.
- Develop lessons specifically related to speaking standards emphasized in CCSS in preparation for final presentations.
- Tighten connection between classroom math investigations/assessments and field-based data collection and more clearly map the connection between the math content of each fieldwork project and the “major focus of CCSS grade-level math standards.
- Structure time for math teachers to work collaboratively with other teachers to ensure practice in math procedures and vocabulary is woven into fieldwork and other classes.
- Use the “What, So What, Now What” protocol to analyze fieldwork-related curriculum plans.
  - *What:* Understanding/analyzing the content and skills being taught.
  - *So What:* Connecting the content learned to the guiding questions and real-world problems. Why do we need to know this? In what other contexts and forms will we see/use this new knowledge? What is important about this learning?
  - *Now What:* Synthesizing and applying new knowledge to make a difference. How do we apply this learning to improve our world/community? What do we need to know next

# Wisconsin for Kids by Kids

## FROM THE CENTER FOR STUDENT WORK

When elementary students in Wisconsin needed to learn about the history of their state, there weren't many resources for them to draw from. Recognizing that they had an authentic audience that needed their help, middle school students from Winnequah Middle School in Monona, Wisconsin, wrote this book celebrating the people and places of Wisconsin. Students conducted extensive research and worked with local experts, including historians, journalists, and illustrators, to create this professional-quality book. It is an excellent example of the informational reading and writing required by the Common Core.

Every student in the school contributed to the creation of *Wisconsin for Kids by Kids*. The writing and illustrations went through multiple drafts, resulting in a high-quality product that is succinct and accessible for the target audience: elementary students.



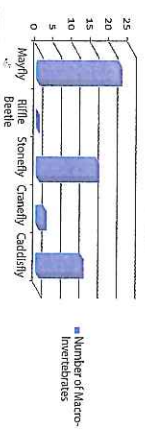
“difference” is already intense and time-consuming work. Adding more opportunities to grapple with complex texts, develop evidence-based writing skills, and ensure students are thinking critically about the content in conjunction with this kind of fieldwork is, for sure, asking a lot. However, it is the kind of work our particular school needs most.

Students at REALMS are learning and experiencing things that most middle school students never get to experience. Implementing the CCSS holds the potential for creating citizens who care about the earth, care about each other, and care about learning—and have the skills to make a difference as scholars. ■

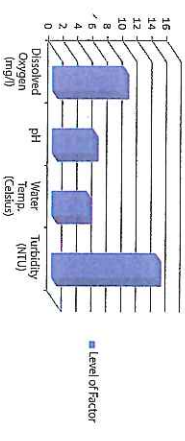
Roger White is the director of Rimrock Expeditionary Alternative Learning Middle School (REALMS) in Bend, Oregon. He has been a school leader at REALMS for 10 years and was a teacher for 16 years.



2011 Shevlin Park Macro-Invertebrate Data



2011 Shevlin Park Water Quality Data



(left) REALMS students put their fieldwork skills—collect, sort, observe, draw, classify, analyze, infer, communicate, and care—into action. (above) These graphs represent some of the data students gathered to answer the inquiry question: *What are the differences in benthic macro-invertebrate populations between our Tumalo Valley study site and our Shevlin Park study site, with comparisons across time, and how are these populations affected by water quality factors?*