

# Tahoma High School Integrates Physical Education With Science and Literature in the Great Outdoors

## Program Team

Tahoma High School, Covington, WA

### Outdoor Academy Teachers

**Tracy Krause**, Physical Education Teacher

**Jamie Vollrath**, Founding Language Arts Teacher (now at Saline High School, Ann Arbor, MI)

**Mike Hanson**, Founding Science Teacher (now Dean of Students)

**Bill Weis**, Science Teacher and District Science Coordinator

**Matt Tucker**, English/Language Arts Teacher

**Dan Howell**, AP Environmental Science Teacher

### Administrators

**Dawn Wakeley**, Executive Director of Teaching and Learning

**Terry Duty**, Principal

**Tony Davis**, Associate Principal/  
Athletic Director

**SHAPE America** – Society of Health and Physical Educators is the nation's largest membership organization of health and physical education professionals. The organization sets the standard for health and physical education in the U.S., and its National Standards for K-12 Physical Education serve as the foundation for well-designed physical education programs across the country. SHAPE America was also a proud member of the coalition that developed the National Health Education Standards, and is a founding partner of the Presidential Youth Fitness Program, *Let's Move!* Active Schools and the Jump Rope For Heart/ Hoops For Heart programs.



**Issue:** For a decade, Tahoma High School physical education teacher and SHAPE America member Tracy Krause observed that a large segment of his high school students did not elect to take a physical education class beyond the required two years. An outdoorsman with many diverse interests, he was surprised to learn that so many Tahoma students had never gone for a hike or tried fly-fishing. The student body represented a wide cross-section of achievement: some were highly motivated AP students; others had never read a book and their lack of academic interest was reflected in their test scores. Could there be a way to address all of these issues simultaneously?

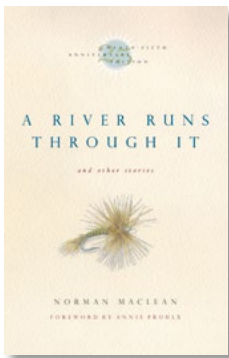
**Big Idea:** Over time, Krause became convinced that exposure to Washington state's incomparable "outdoor classroom"

could spark a lifetime of enjoyable physical activity and literally open the door to students learning more about the world and themselves. Together with his English and science department colleagues, Krause developed a unique, integrative program for sophomores: an opt-in recreational unit called "Outdoor Academy" focused around activities like rock-climbing and fly-fishing while integrating other core academic subjects. Unrestricted by morning or afternoon school bells, the students would be bused from campus several times a year to head into the wilderness.

**Implementation:** A team of physical education, biology and language arts teachers — chosen for their enthusiasm for the program concept — worked closely together on all aspects of the unit,

integrating all three subject areas. While challenging their physical and mental limits in the rock-climbing unit (PE), students expanded their views of the environment (science) and the plight of Native Americans with “Chief Seattle’s 1854 Oration.” William Golding’s *Lord of the Flies* prompted a debate about human nature and the pitfalls of self-governance (English).

As they learned how to tie flies, cast a fly rod, and go fly-fishing, the students read and discussed Norman Maclean’s



novel, *A River Runs Through It*, and John D. Voelker’s poem, “Testament of a Fisherman.” With the science teacher, they analyzed invertebrates collected from a

local river. Through grants, Krause was able to build a rock-climbing wall at the school and fund construction of a second one at a new high school. Sage, a fly-rod manufacturer, supplied the school with fly-fishing equipment at cost, which was paid for through a boating and fishing grant.



**Takeaway:** Outdoor activities can not only provide a foundation for future fitness and enjoyment, they can be used to teach a wide range of subjects. The integration of wilderness and academics can foster self-confidence, teamwork, community, problem-solving, and many other skills, as well as an appreciation for our fragile environment. It also can ignite students’ interest in reading and science. “Students will eagerly read books when the subject excites them,” notes Krause. After collaborating with different science and English teachers on this program over the past dozen years, Krause believes it takes a certain personality to make it a success: Teachers must be flexible about lesson plans, appreciate the time it takes to set up and plan, and understand that

community and team-building skills can be as important as grammar and scientific inquires.

**Results:** Participating students performed significantly higher on academic testing. What’s more, new approach to physical education contributed to an appreciation of lifelong physical activity, as former students returned to help with the program, lending their skills with belaying rock-climbers and other wilderness activities. In 2008, Krause was named National High School Physical Education Teacher of the Year by the National Association for Sport and Physical Education (now known as SHAPE America).

**Fast Facts:**

- Budget: \$6,500
- Funding: Grants
- Advance Planning Time: 3 participating teachers dedicate four weekends a year to planning and meet on alternating days throughout school year
- Students: 85 each year



**SHAPE America’s National Standards for Physical Education**

- The physically literate individual:
- ✓ Demonstrates competency in a variety of motor skills and movement patterns.
  - ✓ Applies knowledge of concepts, principles, strategies and tactics related to movement and performance.
  - ✓ Demonstrates the knowledge and skills to achieve and maintain a health-enhancing level of physical activity and fitness.
  - ✓ Exhibits responsible personal and social behavior that respects self and others.
  - ✓ Recognizes the value of physical activity for health, enjoyment, challenge, self-expression and/or social interaction.

**Additional Resources**

Links to more information about this program can be found at [shapeamerica.org/casestudies](http://shapeamerica.org/casestudies).



50 Million Strong by 2029 is SHAPE America’s commitment to empower all children to lead healthy and active lives through effective health and physical education programs.