



Pacific Education Institute
Real Life. Real Knowledge.

Pacific Education Institute

Bill Taylor, PEI President

Dr. Margaret Tudor, Executive Director

Using the environment as a context, PEI provides schools and teachers with tools and support to help students become socially and scientifically literate citizens, adept at critical thinking.



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501(c)3 Charitable Organization





About PEI



The PEI Board of Directors includes:

- Agriculture and Natural Resource Business Leaders
- K-12 and Higher Education Leadership
- Tribal and State Government representatives



PEI Fills Gaps

PEI researched environmental methods to use in science

PEI is a pipeline to more STEM career choices



PEI Work-Based Learning Growth

School Year	2004 – 2005	2005 - 2006	2006- 2007	2007- 2008	2008- 2009	2009- 2010	2010- 2011	2011- 2012	2012- 2013	2014
PEI School Districts	4	6	11	15	23*	30	43	68*	76	81
					Add Coast			Add Eastern WA		

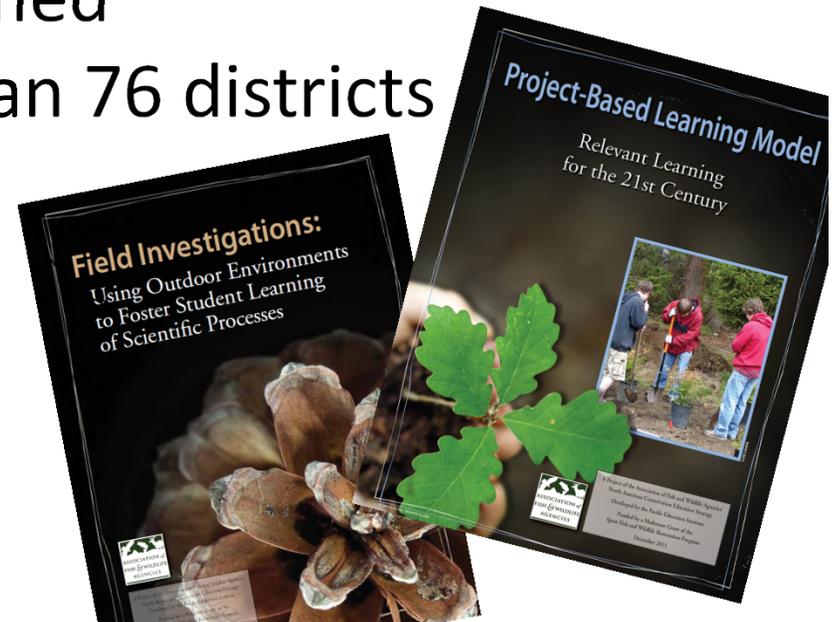
School District teacher teams receiving Pacific Education Institute professional development and coaching from 2004 to 2014. PEI professional development focused on Field Investigation and Project-Based Learning preparing teachers to guide students to successfully engage business and industry through Work-Based Learning

PEI's Impact

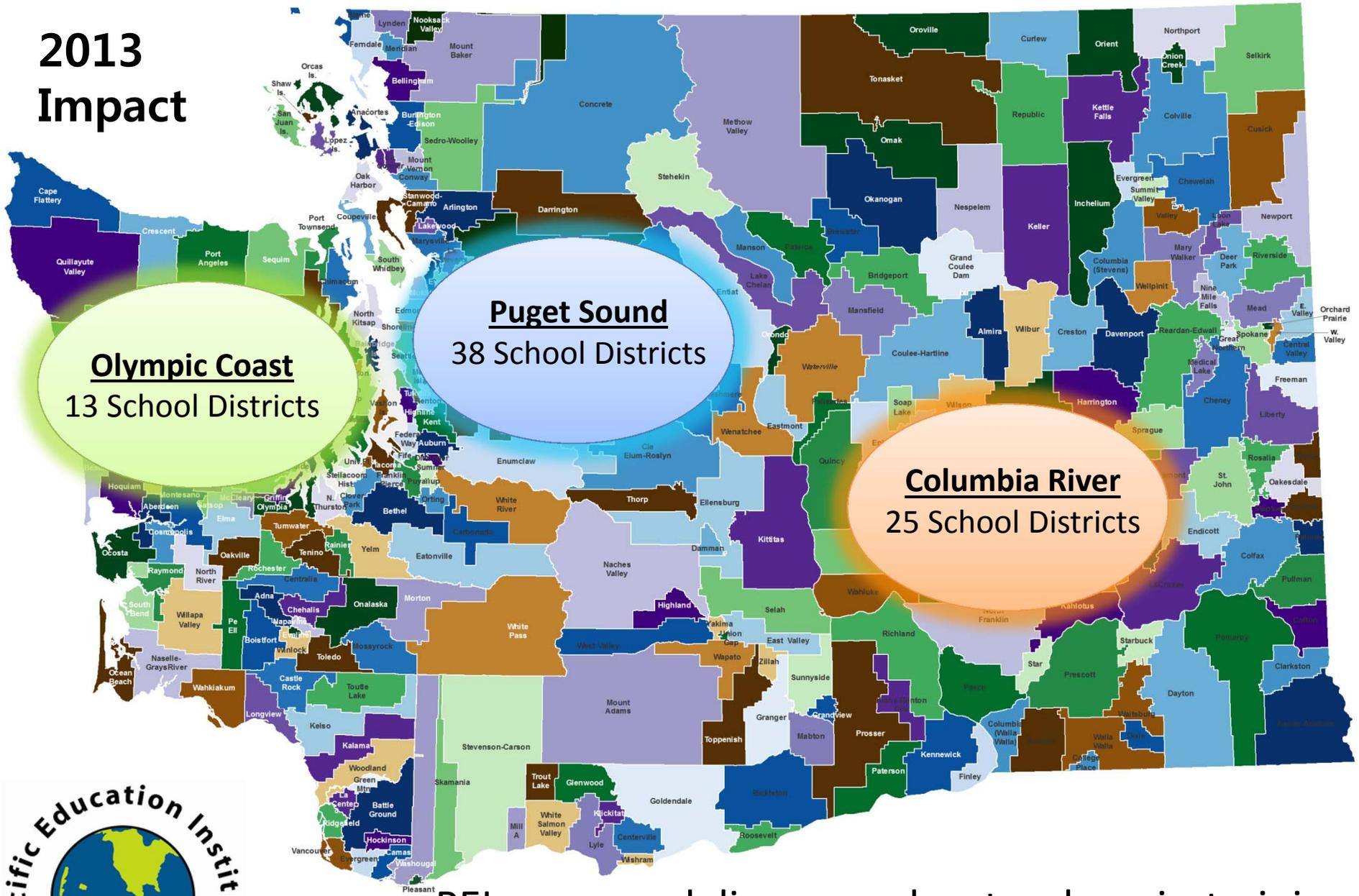


In 2012-2013:

- 729 teacher participants
- Over 18,225 students conducted field studies/projects
- 168 Pre-Service Teachers trained
- 129 Work-Based mentors trained
- PEI materials used in more than 76 districts
 - **Field Investigation**
 - Outdoor Observation Skills
 - Schoolyard Biodiversity Investigation
 - **Project-Based Learning**
 - Systems Thinking and Analysis
 - Landscape Investigation



2013 Impact



Olympic Coast
13 School Districts

Puget Sound
38 School Districts

Columbia River
25 School Districts



PEI program delivery reaches teachers-in-training, current teachers, administrators and informal educators.



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Impact at a glance

PEI at work in schools and the environment.
Case Study Example:
Federal Way Public Schools

Woodmont K-8 School
 Saghalie Middle School
 20 Teachers
 600 Students



Plan with School Leaders

- Superintendent: Robert Neu
- Science Department Coordinator: Sharon Norton

PEI develops school district relationships with leadership and teacher teams.



Train Teacher Teams

- Lead workshops on Field Investigation & Project-Based Learning
- Convene curriculum planning
- Provide teacher coaching in classroom & outside

PEI provides substitutes for 20 teachers meeting 3 times throughout the year.



PEI recruits community mentors to work with students and teachers.

Connect Community Stakeholders

- Seattle Aquarium
- Taylor Shellfish
- Marine Science and Technology Center
- University of Washington - Tacoma



Prepare Students in Class

- Field Investigation skills practiced: Water testing, vegetation & animal observations
- Project development: Students analyze stakeholder contributions

PEI provides coaching to teachers and ensures classrooms have the equipment they need.



Engage Students Outdoors

- Field experience –collected invertebrate data on Redondo Beach
- Mentors provided expertise to students at beach
- Showcase -students presented solutions to 300 community members

PEI provides transportation and coaching the first year of the Field Experience.

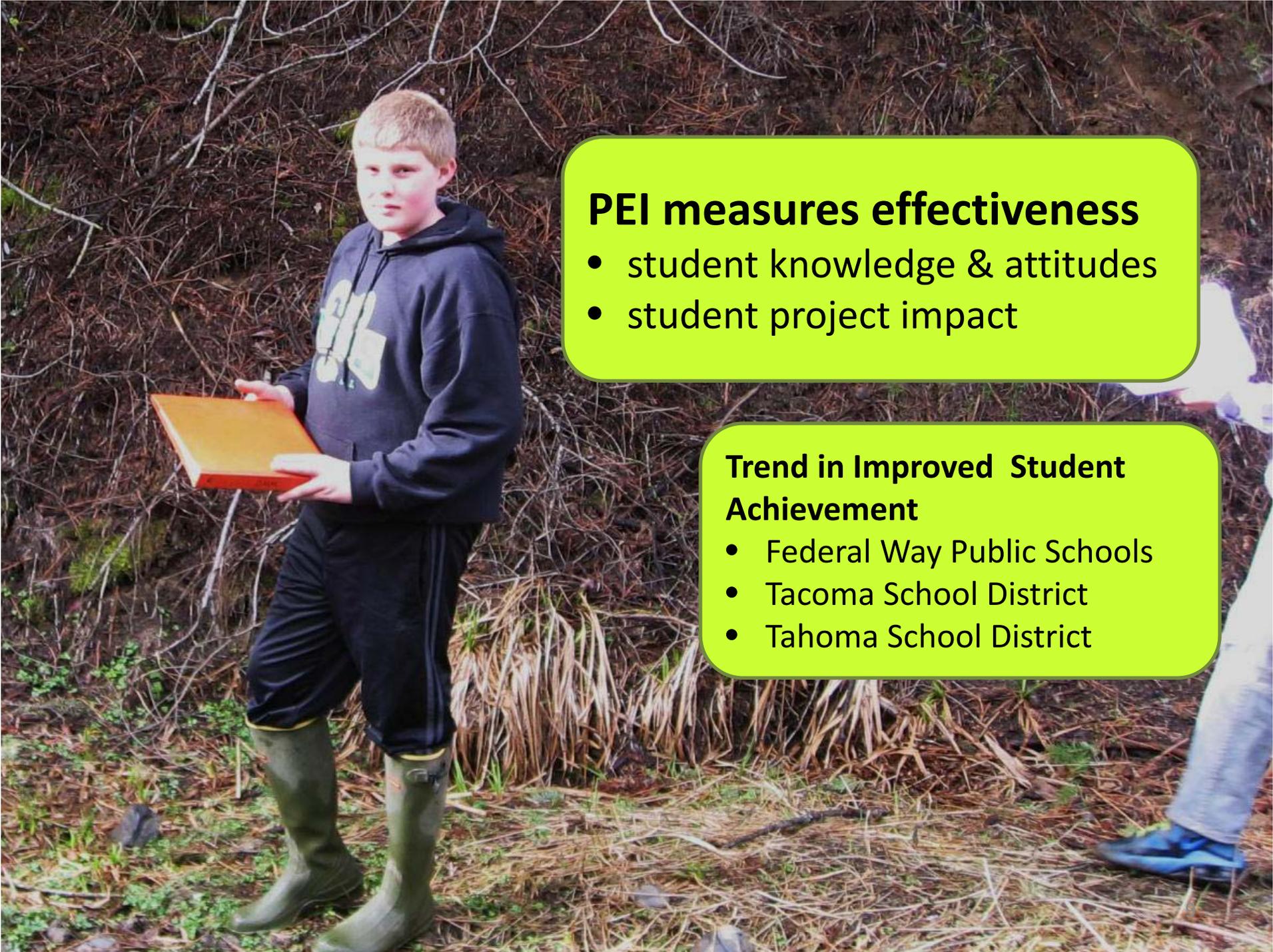
PEI funded this project in large part through support from Puget Sound Partnership, The Russell Family Foundation & Washington Forest Protection Association.



Benefits to Students & Community

- Test success: Saghalie & Woodmont science scores improved 15%
- Real science used by Seattle Aquarium research
- Environmental Stewardship

PEI measures student knowledge and attitudes and tracks student projects to understand the impact of program.

A young boy with short brown hair, wearing a black hoodie with a green logo, black pants, and green rubber boots, stands in a wooded area. He is holding a clipboard with a yellow cover. The background consists of dense, dry brush and trees. To the right, the lower leg and blue shoe of another person are partially visible.

PEI measures effectiveness

- student knowledge & attitudes
- student project impact

Trend in Improved Student Achievement

- Federal Way Public Schools
- Tacoma School District
- Tahoma School District

Field Studies & Project Based Learning: Career Connections Between Shellfish, Local Growers and their Communities



Field STEM & Civics: Shellfish Lessons



Observations
of an Oyster
Shell



Oysters as a
System



Oysters in
the
Environment
(Ecosystems)



Oysters in
the Economy



Connect to
Community -
Showcase





PEI Field STEM for all students

