

## Ready for College, Ready for Sea - A 21<sup>st</sup> Century Approach to Education

### *Place-Based Education in the Maritime Community of Port Townsend, Washington*

#### *Executive Summary*

Port Townsend is a community uniquely positioned to model what sustainable stewardship of our ocean planet looks like in practice. Maritime communities, by nature, represent the intersection of human activity where land meets sea and the rich dynamic represented in that relationship. As our oceans are in peril, so are we. As we deepen our understanding of our impact on our surrounding saltwater world, we become more responsible stewards for a healthy future. We believe our prospects as a community are directly tied to how well our young people are educated and apprenticed for their futures here in this special maritime nexus.

In order to create a more sustainable future, the *Port Townsend School District* is beginning to overhaul P-12+ education by creating a cohesive, place-based curriculum that unifies learning along a central focus for a student's entire school career. This approach combines the proven successes of thematic schools with foundational learning at lower grade levels. By focusing this place-based approach around the unique maritime character and economy of Port Townsend, the schools will anchor student learning in their community by preparing students for both maritime and non-maritime employment while engaging them in rigorous academic studies.

The intended outcomes are threefold:

- Integrate applied relevance with education while exceeding State academic standards.
- Serve as a regional resource for students interested in pursuing maritime related studies or careers.
- Create a model for improving education through place-based community supported learning.

This project enjoys community support, a district small enough to be nimble and able to affect change with minimal delay, and district leadership and partner organizations with the credibility, enthusiasm and expertise necessary for success. Initial business and program planning show that while improving student outcomes by re-orienting the very structure of a school district requires an increase in financial resources, upon full implementation no additional funding will be required to sustain the operations of this project. This initiative will improve education's effectiveness, increase the rate of return on educational spending, and provide a model that can be duplicated within other districts across the nation.

#### **Port Townsend feels the effects of a struggling education system.**

Like many other districts throughout the state and country Port Townsend's schools are

underperforming. Student math and science assessments routinely fall at or below the national average. In 2010-2011, 34% of Port Townsend School District students earned well-below standard and below standard End Of Course (EOC) math and science test scores. Among high school students during the 2011-2012 academic calendar year 26% of students fell into the categories of well-below standard and below standard on their ECO math and science test scores<sup>1</sup>.

Graduation and retention rates are also concerning. Since 2008, about 80% of students in Grade 9 received a high school diploma within four years of starting their secondary school career, while the drop-out rate has remained around 4%<sup>2</sup>. In a small district with a high school student population of only 486 students, that equates to 19 Port Townsend high school students who disengage from the education system and community in some capacity each school year.

Teachers and administrators often feel a sense of disconnect from student outcomes and how these outcomes relate to the community at large. Poorly performing schools also stall economic growth and alter demographics as families emigrate in search of family wage jobs and progressive education institutions able to provide integrated and cohesive educational opportunities to their children. In Port Townsend, from 2002 to 2008 the number of students enrolled in the *Port Townsend School District* fell nearly 9%.<sup>3</sup> Since 2008 enrollment in the Port Townsend School District dropped another 9% and there are indications this rate will drop again in the coming year.

We believe there is a direct correlation between a student's education and the health of a community. While additional funding may provide a temporary increase in resources, district administrators believe a transformational shift is needed that better engages, educates and prepares students for the new economy.

We propose the implementation of a district-wide, cohesive place-based education framework.

### **A place-based education is the right framework for community-focused change.**

The *Port Townsend School District*, *Northwest Maritime Center* and other key community stakeholders have committed to redefining education by pioneering a groundbreaking cohesive place-based model for education district-wide, linking learning in all grade levels through a central theme. This model connects learning to the signature sector of our local economy, and leverages existing community resources to make that learning possible. In doing so the focus of the community shifts to depend on public schools as a key resource for community development rather than simply educating students to augment their departures.

We believe that educational effectiveness improves dramatically when classroom learning is given contextual framework based in real-world scenarios that excite students' imaginations.

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<sup>1</sup> "State of the Schools: Washington State Report Card" <http://reportcard.ospi.k12.wa.us> accessed 2/19/13

<sup>2</sup> "State of the Schools: Washington State Report Card" <http://reportcard.ospi.k12.wa.us> accessed 2/19/13

<sup>3</sup> "State of the Schools: Washington State Report Card" <http://reportcard.ospi.k12.wa.us> accessed 2/19/13

Learning comes more naturally when it is rooted in a community and surroundings that are familiar. This place-based approach to education provides opportunities for students to master a level of competency with increased confidence and self-awareness.

**Maritime curriculum prepares students for college or the work-force.**

Weaving experiential maritime experiences throughout a student's P-12+ experience will augment general education while making explicit the natural inter-dependencies among students, teachers and community members, a critical element of powerful learning experiences. This project is not an attempt to use traditional methodologies with a maritime overlay, nor is it an attempt to turn every student into a boat builder or mariner. The methodology provides opportunity to use maritime experiences to make education powerful and engaging, while not limiting students' choices for exploration beyond maritime subjects. This is not a vocational program where student participation is limited to maritime careers. Rather, this is a program designed to model the value of utilizing the rich assets of an amazing community and place, integrating academics and the community.

A student interested in pursuing further studies in another discipline or domain will have developed the requisite confidence to organize their learning. This learning is centered on relevance, rigor and relationship derived from a history of experiential learning, resulting in a deeper appreciation for their community and the value of connected learning.

**By utilizing a community's greatest asset as a platform for learning a change in the way learning happens begins to occur.**

This effort will utilize Port Townsend's rich and thriving maritime heritage to create a cohesive P-12+ curriculum, providing a model for education that is rooted in what is local- a town's unique history, environment, culture, economy, literature, and art. Research indicates that experiential place-based learning is powerful, and that its role in a cohesive and comprehensive P-12+ curriculum will improve learning and understanding, resulting in greater scholastic achievements and successes<sup>4</sup>.

Nearly 1300 students, 75 teachers and a visionary and dedicated administrative staff, make the Port Townsend School District the right size to pilot this comprehensive and transformative approach to learning. This initiative is enjoying significant support in its early stages. Teacher groups and the greater Port Townsend community have expressed their support, as have community groups who have hosted presentations on the subject.

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<sup>4</sup> Lieberman, Gerald A. and Linda L Hoody. 1998. "Closing the Achievement Gap: Using the Environment as an Integrating Context for Learning." San Diego, CA: State Environment and Education Roundtable.

To date the following private, non-profit and municipal organizations have **endorsed a community-wide economic vision that includes this progressive model for education change:**

<ul style="list-style-type: none"> <li>• City of Port Townsend</li> <li>• Economic Development Council TEAM JEFFERSON</li> <li>• Foss Marine Holdings</li> <li>• Jefferson County</li> <li>• Jefferson County Chamber of Commerce</li> </ul>	<ul style="list-style-type: none"> <li>• Northwest Maritime Center</li> <li>• Port Townsend Marine Trades Association</li> <li>• Port of Port Townsend</li> <li>• Port Townsend School District</li> <li>• Puget Sound Pilots Association</li> </ul>
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**A maritime theme is woven throughout a student’s entire academic career.**

A maritime theme was chosen for the district wide focus because while Port Townsend has many attributes, at its core it is a maritime community where several successful maritime-based programs are currently embedded into its schools. For this project the term maritime indicates a broadly applicable inclusion of marine concepts, themes, and representations of the interaction between our human community and the natural oceanic environment which all integrate into this place-based approach to learning.

For nearly a decade the *Northwest Maritime Center* has partnered with the *Port Townsend School District* to provide a **Maritime Discovery Program** for 7<sup>th</sup> graders, which catalyzes learning, and weaves an experiential theme throughout the students’ school year. With science, technology, engineering and mathematics (STEM) curriculum serving as the core, and also incorporating the expressive arts, students learn using longboats and the Puget Sound as a classroom. A portion of the program is spent on the water and the remainder is spent in classrooms with teachers who orient their lesson plans to a maritime content. Students learn mathematics through navigation, language arts through maritime nomenclature, and science through weather and wind observations and recordings. The integration of digital technologies into this experiential learning model further strengthens the lifelong skills being developed.

While the program provides powerful opportunities for classroom learning, pre and post program evaluations indicate impacts outside of school subjects. Through this program, students learn to recognize their personal strengths through lessons that foster a sense of responsibility, teamwork, and leadership instilling in them a sense of greater civic responsibility. When students were asked to rank how they felt about ‘improving leadership skills’, they consistently ranked themselves at above average on a scale of 1 to 4. When students were asked whether the program helped them to ‘improve their communication skills’, again the responses were consistently above average. Teachers also recorded positive growth in post program evaluations. Across the board, students showed improvement in the areas of: ‘taking responsibility for themselves and others’, ‘taking initiative’, and in their ‘ability to adapt to change’.

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### ***Community resources for rich education***

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Port Townsend has an abundance of organizations already providing experiential education to school aged students, institutions of higher learning, vocational training programs, and enrichment education for all ages. The following list of organizations and institutions conveys the depth of potential experiences that could be woven into this P-12+ maritime framework:

- Port Townsend Marine Science Center
- Northwest School of Wooden Boatbuilding
- Centrum (performing arts)
- Community Boat Building Project
- Northwest Maritime Center
- Port Townsend School of Woodworking
- Goddard College
- Jefferson County Chamber of Commerce Career Mentorship
- Port Townsend Marine Trades Association's Apprenticeship program
- Schooner Martha Foundation
- Sound Experience
- Jefferson County Land Trust
- WSU Extension/ 4-H
- SeaGrant Washington
- Peninsula College
- Port Townsend School of Maritime Art
- Writer's Workshope
- Work Source
- Crawford Nautical School
- US Maritime Academy
- Clemente Courses for the Humanities
- Wooden Boat Foundation
- Port Townsend Library
- Cedarroot Folk School
- Old Dominion University
- Rat Island Rowing Club
- Fort Worden Lifelong Learning Center
- YMCA
- Sea Scouts
- Skookum
- Port Townsend Parks and Rec
- Jefferson County Historical Society
- Copper Canyon Press
- Recyclery
- NW Outward Bound School

### **Place based learning in a maritime community provides endless opportunities for creative curriculum development.**

A Port Townsend public school education is currently offered as a collection of classes with no direct interdependence. For example, from a student's perspective there is no obvious progression between what they learn in 4<sup>th</sup> grade history and what they learn in 7<sup>th</sup> grade science. With a cohesive themed approach, virtually any topic at any age can be presented in ways that build upon a student's prior years of instruction. From kindergarten art projects coloring signal flags and exploration of touch tanks or sandy beaches, to middle school students learning math, history and science while navigating longboats in Puget Sound, to high school junior and seniors choosing to immerse themselves within a maritime context through a high school maritime academy, opportunities to learn through a maritime medium are applicable to every grade level. Lessons in mathematics come alive through the creation of navigation plans. History will be explored through ships' logs, and interacting with the shipping industry is a springboard for lessons in economics and world affairs.

### **Anchoring academics around a centralized maritime theme creates cohesion throughout a student's career.**

The number of maritime focused educational institutions using the sea as a tool for powerful learning and weaving maritime experiences into school curriculum in the Puget Sound region are many. In addition to the *Northwest Maritime Center* the Puget Sound region is home to the historic schooner *Adventuress* which provides students with opportunities to learn through unique hands-on experiences; the *Port Townsend Marine Science Center* provides students personalized instruction in the marine sciences and natural history of the region; and Bainbridge Island's *Salish Sea Expeditions* integrates student learning through inquiry-based science instruction. All of these institutions lend themselves naturally to partnership, allowing for effective and efficient implementation of this cohesive place-based model for education.

Students interested in focused maritime studies will have the opportunity to enroll in a *Port Townsend High School Maritime*

*Academy* for their junior and senior years of high school, immersing themselves in maritime themed learning and be able to pursue advanced studies in their chosen field. One successful example of a maritime academy program housed within a public school district is at Ballard High School. For nearly fifteen years, the *Ballard Maritime Academy* has provided specialized industry focused curriculum for high school students. A cohort of teachers plan and coordinate the curriculum, allowing for interrelated and cohesive curriculum development and implementation. Students enroll in college-preparatory, interdisciplinary marine science, technical education and liberal arts courses with lecture, laboratory experiences, and field trips that include regional resources like the *Zodiac* or *Adventuress*. Maritime industry professionals also assist students, providing support, mentoring, and experiences outside of the normal classroom time<sup>5</sup>.

At the *Port Townsend Maritime Academy*, apprenticeship and mentorship opportunities will be provided alongside maritime and non-maritime professionals who work in the community, allowing students to work on individual projects with guidance. Students who choose to pursue the Maritime Academy will graduate with the same college-prep level diploma as their peers and will also have the opportunity to obtain the US Coast Guard issued credentials required to work onboard a tugboat, passenger ferry or other commercial vessels. While still preparing students for any college experience, the Maritime Academy will offer students the foundation they need specifically for entry-level employment in the maritime industry or advanced studies at a maritime college as they also master Washington State and Port Townsend Public Schools academic standards.

### **A place-based model for education will impact the entire community.**

A successful P-12+ maritime place-based program has multiple positive outcomes for the community. A program of this caliber and size will create a pipeline of skilled professionals supporting this region's aging maritime workforce and help bring specialized jobs to Port Townsend. In Jefferson County, the current median age is 54.7 years, nearly 20 years older than it was in 1980 and 16 years older than the current median age for Washington State.<sup>6</sup> With an anticipated 30% of professional mariners nearing retirement in the State of Washington, a shortage in directly related maritime industries is estimated to occur by 2017.<sup>7</sup> An infusion of young professionals entering the maritime workforce earning family wages means Jefferson County could experience a positive change in the numbers of students enrolled in the school district, resulting in a more robust district and community. This place-based model also supports our local teachers as they become true partners with the community, working closely with colleagues and community members to develop core curriculum and partnerships that reach further into the community.

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<sup>5</sup> "Ballard Maritime Academy" [Ballardmaritimeacademy.wordpress.com](http://Ballardmaritimeacademy.wordpress.com). accessed 2/19/13

<sup>6</sup> Robert Berstein, public information officer, U.S. Census Bureau, as quoted in report "Oldest Population in the State" in Port Townsend's *The Leader*, March 27, 2013

<sup>7</sup> Workforce Development Council of Seattle King County, <http://www.seakingwdc.org/reports/state-of-the-workforce.html>

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***Hi-Tech training for learning and employment readiness***

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The Port Townsend School District has begun to secure the resources to build a “design build” studio that will teach students the modern principles of computer-aided design and rapid prototyping, using a 3D printer. This lab will be located on the high school campus, in existing space, and will be available for use by the public and start-up companies. Student learning will be mentored by local manufacturing businesses and their new found skills will both apply academic concepts to real world applications and will immediately employable.

With industry input on the curriculum, students will go through a three-step process: first designing their project with a 3-D project, “printing” it out, and making it themselves with conventional shop equipment. Local manufacturers say they are hungry for people with this combination of skills: people who can both design on the computer and know the actual steps for making things. The students will hold in their hands a physical product of their work that will part of the portfolio they show employers.

Students from this program could go on to work for organizations like Janicke Industries, a composites company the governor highlighted in his inauguration speech, or the Bremerton Naval Shipyard. Most importantly, it will support the growth of Port Townsend’s own maritime economy. As an “open shop”, it will be available after-hours to entrepreneurs and start-ups. Some of these entrepreneurs may even be high school students.

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**Ready for college ready for sea - A 21<sup>st</sup> century approach to education.**

The *Northwest Maritime Center* and *Port Townsend School District* have been working together since August, 2012, to imagine and plan a transformation of P-12+ education that engages and impacts the entire community. In November, the two organizations, with assistance from a private consultant, convened a group of educators from the school district, maritime education professionals from the region, and key stakeholders in the community to discuss what P-12+ maritime-based curriculum and graduates of this new education model and academy could and should look like.

The enthusiasm of the community at work imagining their future was contagious. Participants felt confident that graduates of this comprehensive P-12+ education would emerge with increased confidence and be self-directed life-long learners, motivated to nurture their community. Port Townsend graduates will be college ready, with strong academic preparation in STEM subject areas, prepared for any future of their choosing. And should they choose a maritime path, they will be ready for advanced study at a maritime training school or able to immediately join the workforce, utilizing one of the many skills acquired during a previous apprenticeship or independent project.

**Next steps – moving toward a more cohesive education system.**

Momentum is building as engaged community members, elected officials, educators and maritime professionals from throughout the region step forward helping to ensure that the curriculum is robust, relevant and scalable. Since that initial meeting, school administrators and project partners have created operational and funding plans realizing that changing existing curriculum will require start-up funding, but also the necessity that any transformation must have a zero impact on the budget in order to be sustained. Ongoing costs must fit within existing funding sources. The current plan forecasts that a change of this caliber will be revenue neutral in six years.

It is important to recognize the district’s current successes in place-based experiential education and expand these ideas as we learn. Incremental changes are already noted in how teachers design

experiences for their students in the classroom and these will serve as a foundation for the critical mass among teacher that will grow through training and collaborative curriculum development opportunities. The following year-one goals have been identified as priorities:

- Develop one-year implementable project for target grade level.
- Identify and raise sufficient funds to cover implementation costs of one-year fundable project.
- Hire planning and curriculum development experts to design maritime-based learning modules.

### **Conclusion**

This place-based education initiative is not about a short-term change effort that will affect only the immediate needs of the district to improve student performance for today's students. Instead, it is meant to deeply transform how the entire community thinks about schooling as they come together around better results for Port Townsend's children, a vital community, and a deep sense of caring for the natural environment upon which their economy is based. As students begin to experience school in ways that are relevant to their home, their desires, and their futures, we are confident that the momentum of these changes will take root and invest the community in its future through its children. In Port Townsend, this desire to engage in a community-wide effort is inherent; it is rich with human capital and forethought. We believe that this model, however, is absolutely replicable across the nation. Utilizing a community as a platform for learning and a place-based curriculum – wherever that place may be – can and will transform the way learning occurs, resulting in vibrant communities and an educated citizenry, our democracy's greatest asset.

David Engle, Jake Beattie and Katie Davis

*Appendices attached*