Citizen Science

Belly Biology on the Beach

Beach Monitoring with High School Students in Puget Sound

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The Program
Seattle Aquarium is bridging the gap between the need for public involvement in local schools and protection of nearshore habitats. This successful, on-going project empowers youth—our greatest hope and resource for the future health and survival of the Puget Sound ecosystem. The Aquarium organized a steering committee of local scientists, educators, and partners to discuss goals and describe the common elements of success in citizen science-driven programs.

What are the essential elements of a successful citizen science program?

For Students
- Capture hearts and minds of student citizen scientists
- Provide clear scientific objectives
- Foster student ownership of the process and accomplishments
- Engage students in hands-on, meaningful field work ("belly biology")
- Provide students with results and public recognition

For Teachers
- Professional development workshop with clock hours
- Teacher training in monitoring protocols and field investigations
- Curriculum for classroom and field
- Teacher stipends and substitute teacher reimbursement
- Alignment with State standards

What Students Learn
- Field investigation methodology
- Data collection — methodology, protocols, and data interpretation
- Quality control in conducting field investigations
- Identification of marine flora and fauna
- Tides
- Beach natural history
- Communicating/sharing their findings in a symposium
- Stewardship and conservation of Puget Sound

What about the data?
- High quality data is made available after each monitoring session to County and State resource agencies, Washington State University Island County Beach Watchers, and others to inform a wide audience about local Puget Sound beaches.

For the Project
- Develop a team of local scientific advisors
- Comprehensive training of student scientists
- Quality control/Quality assurance
- Rigorous data analysis
- Project sustainability through teacher training and involvement
- Financial and resource commitment to a long-term monitoring project (15 years) by the Aquarium and school partners
- On-going program evaluation
- Networking to develop public awareness of project

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Seattle Aquarium Society