

Lund's Gulch Streamkeepers

Math in Service of Community

Mission Statement:

Lund's Gulch Streamkeepers is a citizen's group that monitors and promotes the sustainable quality of all life in our watershed; for ourselves and future generations.

Objectives:

- Create service-learning assignments with quantitative elements that involve students directly in inventory, monitoring, evaluation and restoration of Lund's Gulch Creek Watershed and its ecosystem services.
 - Create discipline specific assignments for courses in Human Ecology. These course are part of the Learn-n-serve Environmental Anthropology Field (LEAF) School.
 - Create discipline specific assignments for courses in Occupational Safety and Health.
- Create a timeline that includes history of service-learning project and goals for the future (including implementation of quantitative assignments).
- Prepare a prioritized plan for the creation of an online database where students can enter data and generate graphs, charts and tables showing historical trends in stream quality.

Quantitative Skills for Human Ecology:

Students who complete a three course sequences in Human Ecology as part of the 2007 LEAF School will:

- learn how to use a GPS receiver to generate and plot latitude and longitude;
- employ sampling to generalize about a larger area;
- learn how to use calipers and tape measures;
- learn how to set up, utilize and map transects;
- distinguish surface velocity and flow;
- generate means and averages;
- calculate percent saturation of dissolved oxygen in water;
- interpret graphs, charts and tables; and
- record quantitative data in field notes and online databases.

Quantitative Skills for Risk Management:

Students who complete Occupational Safety and Health 150, Risk Management will:

- interpret sampling to generalize about a larger area;

- generate means and averages;
- calculate and interpret risk assessment;
- evaluate environmental impact statements;
- interpret graphs, charts and tables;
- extract quantitative data from online databases.

Timeline:

Date(s)	Activity	Participants
December 2004 - March 2005	Planning for and implementation of watershed stewardship alternative spring break activity (activities include removal of invasive species, identifying and mulching native species, removal of garbage and debris)	Edmonds CC Tannenbaum HOA Wethersfield HOA Janice Martin Snohomish County WA Conservation Corps WA Native Plant Society Friends of Lund's Gulch
September 2005 – March 2006	Planning for creation of Human Ecology courses and LEAF School	Edmonds CC Tannenbaum HOA Snohomish County WA Conservation Corps
April – June 2006	1 st offering of Human Ecology: service projects include removing invasive species, live staking, trail maintenance, mulching, etc.	Edmonds CC Tannenbaum HOA Snohomish County WA Conservation Corps Janice Martin
June – August 2006	2 nd offering of Human Ecology; 1 st full LEAF School: service projects include removing invasive species, trail maintenance, removal of garbage & debris	Edmonds CC Tannenbaum HOA Snohomish County WA Conservation Corps
September – December 2006	3 rd offering of Human Ecology: service projects include leafletting neighborhood, supporting streamkeepers organizational meeting & Streamkeepers Academy, removing invasive species, trail maintenance	Edmonds CC Spruce Elementary Adopt-A-Stream Foundation Tannenbaum HOA Snohomish County WA Conservation Corps Friends of Lund's Gulch Brackett's Landing Foundation City of Lynnwood St. Hilda St. Patrick

		Episcopal Church REI
December 2006	Recruitment of a Computer Information System student to create an online database	Tom Murphy Marti Baker Mark Anderson
January 2007	MLK Jr. Day of Service: service project includes removal of invasive species, planting of native species and storm cleanup	Edmonds CC St. Patrick Boy Scouts Snohomish County City of Lynnwood REI Adopt-A-Stream Foundation
January 2007	Math Across the Curriculum – Miami, FL: creation of service-learning assignments	Tom Murphy Kerrie Murphy
February 2007	Service Project: planting of native species in Tannenbaum Native Growth Protection Area	Edmonds CC Tannenbaum HOA Adopt-A-Stream Foundation REI St. Patrick Boy Scouts
January – March 2007	Creation of online database for monitoring & inventory projects	Mark Anderson Tom Murphy Kerrie Murphy Marti Baker Jim Lofstrand Anna Walter
April – June 2007	Implementation of MAC ³ service-learning assignments in Human Ecology (4 th offering)	Edmonds CC Tannenbaum HOA Adopt-A-Stream Foundation REI City of Lynnwood Spruce Elementary
June – August 2007	Implementation of MAC ³ service-learning assignments in Summer LEAF School; Evaluation for NSF	Edmonds CC Tannenbaum HOA Adopt-A-Stream Foundation REI City of Lynnwood Spruce Elementary
September – December 2007	Implementation of MAC ³ service-learning assignments in Human Ecology (6 th offering)	Edmonds CC Tannenbaum HOA Adopt-A-Stream Foundation

		REI City of Lynnwood Spruce Elementary
January – March 2008	Implementation of MAC ³ service-learning assignments in Occupational Safety and Health 150.	Edmonds CC Tannenbaum HOA Adopt-A-Stream Foundation REI City of Lynnwood