

Course Objectives: *Students will be able to*

1. Demonstrate that science is a process by performing field and laboratory exercises.
2. Demonstrate and use technologies such as monitoring equipment, GIS (Geographic Information Systems), GPS (global positioning system), spreadsheets, databases to collect and analyze laboratory and field data.
3. Communicate projects, data and information using multimedia and web-based technologies.
4. Work effectively, cooperate and communicate with a partner and mentor for one-year period.
5. Produce a monitoring binder, science fair poster, research paper and PowerPoint presentation on their project.

Course Grading/Units: This is an elective course required of Watershed Academy students and should be taken initially in conjunction with Environmental Science. Letter grades are based on monthly reports, research paper, attendance at meetings/events, final project report and PowerPoint. Units are based on hours log.

Course Requirements:

- Monitoring must be done on a weekly or biweekly basis. You must collect two sets of data a month. (4-6 hours)—about 2 weeks apart.
- Group meetings with instructor at lunch or after school several times during the year—to be arranged.
- Monthly progress reports and corrections are required in Monitoring binder.
- All email with mentor is to be forwarded to instructor and printed for binder.
- An in-depth research report is due at the end of the first semester.
- A finished/corrected report and PowerPoint presentation is due after the AP Exam.
- You must enter your project in the Santa Cruz County Science Fair, SLVHS Watershed Symposium and participate in Monterey Bay Sanctuary Symposium at CSUMB.

Monitoring Directions:

1. All monitoring is graded on a group basis. A three-ring view binder(with labeled spine and covers) and lab book per group is due each month and must include the following dividers and sections. All material to be typed in Word or similar word processor:
 - a. Old grade sheets
 - b. Hours log (list date, time, person and what was done—you must have a sheet for each person.)
 - c. Research (includes summer assignments)
 - d. Protocols (purpose/materials/methods etc)
 - e. Data table in excel(date, GMT, Location (GPS), qualitative observations, quantitative data)/graphs
 - f. photographs, checkout list, other
 - g. Emails: all email with your mentor must be printed out and included here.
2. Your lab book serves as a field journal of your project and should include dated handwritten entries of all work done in lab, field, with instructor and mentor—quantitative and qualitative data. (this is required for the science fair)
3. All data must be backed up in two locations and a final CD with all data turned in by end of school year.

DUE DATES--Monitoring Binder/Lab book : Oct 2 (Fri), Nov 6 (Fri), Dec 4 (Fri), Jan 8 (Fri), Feb 6 (Fri), April 17 (Fri), May 15(Fri), June 5 (Fri) (Second semester dates may change) (worth ~ 30 pts each) Research Paper due: Wed 1/6

IMPORTANT DATES: Attendance Required!!!! (Watershed Planning meetings 10/1, 1/7, 4/1)

Feb 23: Watershed Advisory 6:00-8:00 PM SLE PAC

Poster Review Session—Date to be announced

March 12-14: Santa Cruz County Science Fair—Santa Cruz County Fair Grounds; Award Ceremony

OPTIONAL: JSH Symposium—Reno--March 18-20, 2010

4/10/10 : Monterey Bay Sanctuary Symposium--CSUMB

May 20-Watershed Open House—--Aquaculture Room 6 PM

May 25, Tuesday, Watershed Academy Symposium 6:30 PM PAC