MARINE & ENVIRONMENTAL SCIENCE FIELD TRIP:
NOV. 3, THURSDAY, 11:30 am to 2:30 pm

Before the Field Trip!
- Hand in your signed permission form & medical insurance info (no form, no medical, no trip! Note: school medical can be obtained – ask your teacher)
- In class you will be assigned a group of 2-4 students. Chaperones will be with no more than 8 students for the morning.
- Take this sheet home to let your family know more about the trip & to prepare all you will need to bring with you – this includes:
  1. notebook & pencil
  2. sunscreen lotion, hat, umbrella (depending on weather)
  3. running or hiking shoes – waterproof if possible (slippers and open-toed shoes will not protect your feet from sharp rocks, mud, etc!)
  4. water and lunch (there are no cafes or vending machines at these places!)
  5. plastic shopping bag to collect samples, trash, etc – you may also want to bring a small backpack, but you cannot leave personal items on the bus!
- Things not to bring: music walkmans, gameboys, other valuables

On the Day of the Field Trip!
Note: If you are not going on the trip, report to the class your teacher assigned you with all your term notes to do alternate work. Stay there for only 1 class, & go to your other class as normal.
- 11:30 – before the bell in your classroom, review agenda, get into groups
- 11:42 – meet bus, get name tags as you step onboard (wear all day!)
- 11:47 – bus departs (remember safety & manners for bus)
- 12:00 – bus arrives at Tantalus Lookout to view Mānoa Ahupua‘a (watershed) & eat lunch … put all trash in bags and dispose in garbage cans! Note: there is no public restroom at the lunch site
- 12:20 – bus departs for UH
- 12:35 – bus arrives at UH (Hawaiian Studies Center or upstream)
- 12:45 – welcoming protocol and Mānoa History & Culture Talk
- 1:15 – groups get water test kits and choose 10 ft x 10 ft site to observe & do water tests
- 2:15 – students get on bus and return by 2:30

After the Field Trip!
- Bring all field trip data to your next class – this includes you group’s: water sample data, & site maps & observations (includes bugs, fish, plants, pollution, waterlines (high tide, etc), rocks, etc. – everything you saw, heard, smelled, &/or felt at your group’s sites!)
- Homework: a draft list of everything people do (or could do) to mālama ka ‘āina in our ahupua‘a.
## Term 1 Ahupua‘a Project Rubric
(How students will earn their grades)

<table>
<thead>
<tr>
<th>Project Criteria</th>
<th>Exceeds Expectations (___% +)</th>
<th>Meets Expectations (___% +)</th>
<th>Does not meet Expectations (___% or less)</th>
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</thead>
<tbody>
<tr>
<td>1. Water Analysis (collection, testing, &amp; written results with kit) <em>Must do this one!</em></td>
<td>Team worked together &amp; completed all tests accurately; did extra tests; helped other teams; fully participated &amp; listened in large group</td>
<td>Team worked together, completed 75% of all tests with accurate results; listened &amp; participated in large group and was off-task no more than 3 times</td>
<td>Team unable to work together &amp;/or completed less than 60% of tests accurately; was off-task, not listening or participating in large group more than 3 times</td>
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2. Flora & Fauna Species Observation (identify types, count, locations of bugs, plants, animals, etc) * Do not take any species away from site!! |

3. Site Mapping & Observation (estimate size, use scale to draw & show location of rocks, high/low water lines, litter, etc.) * Each student in group draws own |

4. Site Clean up (record, clean up litter, oil, etc.) *Bring trash bags & practice safety! |

5. Poster or Model (to show all field trip results to class) *will be done in class after trip |

6. Team Presentation (to tell class what you learned on the trip) *will only have same 1 class to prep this!! |

7. Environmental Action List (team list of everything people do or could do to mālama ka ‘āina)