

# Sehome High Ocean Science

4-25-18

Timing: class starts at 12:25 and ends at 1:50 with 29 enrolled, plus a handful or so that will be able to get out of other classes. Second lunch will start at 12:30 and ends at 1pm. About 50 students have 2nd lunch but probably only a 10-12 will show up.

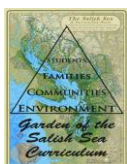
Key Goals: Local shellfish restoration, ocean acidification (OA), Salish Sea Challenge, hands on,

## 12:30-1 SECTION 1

- 10 min powerpoint (Who we are, Chuckanut Bay restoration, kelp and eelgrass restoration acting as a carbon sink, intro to OA, life cycle)
- 15 min demo stations:
  - life cycle
    - *Which life cycle stage is most vulnerable to OA and why?*
  - human smokestack
    - *What happened on the molecular level to cause the color change (include the chemical equation).*
  - live tank with microscope (*Tetraselmis suecica*) to show food web
    - *What is one way that oysters change the environment around them?*
- 5 min regroup

## 1-1:50 SECTION 2

- 5 min Intro to the second half (talk about ecosystem services)
- 20 min Food Web Foundations: Microscope and Stations
  - Plankton tow in well slides
    - *Include one detailed scientific drawing of a plankton that you find in the microscope. Remember to include magnification.*
  - Geoduck velligers (*Panopea generosa*)
    - *Where do velligers fit into the life cycle? Draw the life cycle.*
  - Diatoms
    - Freshwater and marine diatoms (prepared slide)
    - Marine diatoms photo
    - *Thalassiosira pseudonana*
      - *Where do diatoms fit in the food chain?*
  - Local Shellfish ID
    - Abalone and other shells
    - Clam ID necklaces
      - *Key, draw and label one shell. Include anatomical features of the shell and the genus and species name.*
  - Algae (Kelp)
    - *Laminaria*
      - *How does Kelp help to mitigate the effects of OA?*
- 15 min Dissection
  - Work in threes
  - Focus on mantle and shell building
  - Have gills and tentacles in dissecting scopes
  - Dissection WS
  - Things we need: hand lenses, hand sanitizer, forks, paper plates,



- *Draw and label an oyster with all the organs.*
- *Include a detailed drawing of gills or tentacles under the magnifier and explain the function.*
- 5 min Clean Up
- 5 min Wrap up and Salish Sea Challenge and community connections
  - *Why is restoring native shellfish populations considered a priority in the Salish Sea?*

Videos for the teachers

Restoring Native Shellfish <https://youtu.be/fEZfhftzUNw> (4 min)

Ocean Acidification <https://youtu.be/kxPwbhFeZSw> (1.48 minutes)

Acidic Waters Corrode NW Shellfish <https://youtu.be/x7Mpl9dZljk> (6 minutes)

Questions for teachers:

Does he have another class in there before 12:30? When can we come in to set up?

Things from storage:

- Carboy
- Plankton tow
- Live tanks
- hand lenses
- hand sanitizer
- Forks
- paper plates
- Abalone and other shells
- Buckets for clean up
- Clam ID necklaces
- Human smokestack kit (three sets for demos)
- Life cycle kit
- pH scale laminates
- Dissection kit
- Paper towels

