

Aquarium Setup Sheet
For Estuary Investigation

- 1) Discuss the concept of using a model to study phenomena.
- 2) Ask students how they would make a model of an estuary using an aquarium. Ask how their model is the same and different from a real estuary.
- 3) Gather the following materials from the inter-tidal zone and set up two aquariums as follows:
 - a) Use two fish tanks, at least 10 gallons in volume. If these are not available, you could use two 1-gallon glass jars, or as a last resort, two clear 2-liter pop bottles.
 - b). Collect water at the beach and fill the tanks to within an inch of the top. Keep the fish tanks near a window, but away from direct sunlight. Use an aerator in both tanks.
 - c) Obtain water testing equipment for dissolved oxygen and pH. These can be borrowed from your local County Conservation District, or County Stream Team or Waste Management agency, or purchased from various suppliers including:
Hach: www.hach.com
Fisher Scientific: www.fishersci.com
Carolina Biological: www.carolina.com
VWR Scientific Products: www.vwrsp.com
 - d) Test and record the ph and DO everyday for about a week to get baseline data.
 - e) Go back to the beach and collect some samples of healthy *Ulva* (sea lettuce). Use a cookie cutter (or trace around an object) to create identically sized pieces and place equal amounts in each tank.
 - f) Obtain a small quantity of houseplant fertilizer.
- 4) If you are going to continue the investigation with shellfish in the tank consult a local shellfish grower such as Taylor Shellfish if available. Ask for some live oysters and “Green Water” which is food for Oysters.