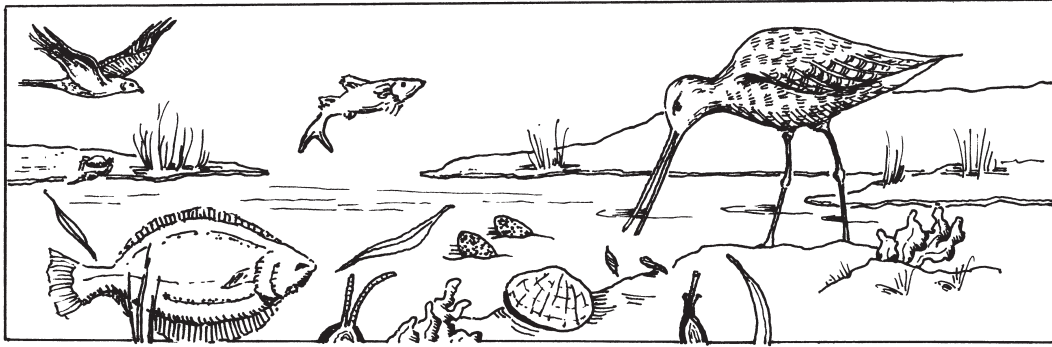


Ecology Chapter Teacher Sheet



Activity #6: Construct a Virtual Habitat

Objectives:

To create a visual representation of a habitat within the Tijuana River Estuary.

Time:

This activity requires several 55-minute class periods to complete. Students will also need extra time to gather materials.

Background:

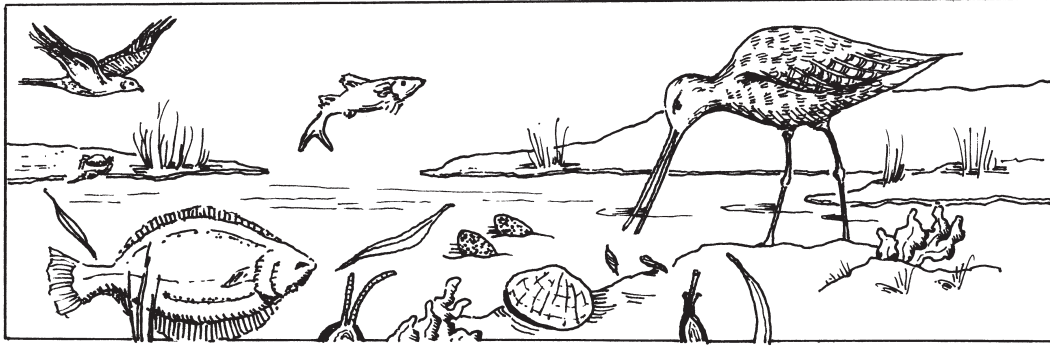
The Tijuana River Estuary encompasses over 2500 acres composed of various habitats - beach, coastal sand dune, salt marsh, mud flat, riparian, and upland. Each habitat is unique in its biotic and abiotic features, and contains organisms that may or may not be unique. As a culminating activity for this chapter, students should be able to construct a virtual habitat, using a see-through container such as an empty aquarium, a box with one side cut out, or some other container that allows viewers to see the details of the habitat. Using information they have learned in this chapter, and in chapter 2, students should be able to explain the biotic and abiotic factors in their habitat, how those factors affect the organisms they are displaying in their habitat, the flow of energy through their habitat, and the soil and water conditions in their habitat.

Procedure:

1. Allow students a few days to gather materials for this activity such as pieces of plants, shells, pictures, a container etc. You may also want to provide some of these things for the students. [Please don't allow students to collect items from the Reserve as it violates public resource code]

2. Students should work in pairs to construct a habitat. You can assign students the same habitat they worked on in Activity 5, or you can also assign different habitats to students so they can broaden their knowledge. One suggestion is to have student groups exchange posters from Activity 5, and the two pairs within the group will produce their own virtual habitat from the poster.
3. After habitats have been assigned, allow students to brainstorm with their partners about ways they will construct their habitat, and materials they will need to bring to class. Habitats can be constructed in class (provide glue, scissors, staplers, paper clips, colored pencils, markers, etc., for student use), or assigned as an at-home project.
4. If habitats are to be constructed in class, allow one or two days class time for the actual construction. Students will be responsible for bringing their materials to class by the date assigned for construction. Each item in the habitat should be labeled.
5. Students also need to write a one - two page paper describing their habitat, including the biotic and abiotic factors, how those factors affect the organisms they are displaying, the flow of energy through their habitat, and the soil and water conditions in their habitat.
6. Each pair then presents and explains their habitat to the class.
7. Once all habitats are completed, display them around the room and have students do a gallery walk of the habitats. Give each student some post-it notes that they can use to leave comments about each habitat.

Ecology Chapter Student Sheet



Activity #6: Construct a Virtual Habitat

PURPOSE:

You will create a visual representation of a habitat within the Tijuana River Estuary.

TIME:

This activity requires several 55-minute class periods to complete. You will also need extra time to gather materials.

BACKGROUND:

The Tijuana River Estuary encompasses over 2500 acres composed of various habitats - beach, coastal sand dune, salt marsh, mud flat, riparian, and upland. Each habitat is unique in its biotic and abiotic features, and each contains organisms that may or may not be unique to it. As a culminating activity for this chapter, you will construct a virtual habitat, using a see-through container such as an empty aquarium, a box with one side cut out, or some other container that allows viewers to see the details of the habitat.

PROCEDURE:

1. Your teacher will assign a habitat to you and a partner. This may be the same habitat you worked on in Activity 5, or it may be another habitat. You and your partner are going to construct a Virtual Habitat (visual representation) of your habitat.
2. After you have been assigned a habitat, you need to decide which organisms you will display, what type of container you will display them in, and what your habitat will look like.

The container: You should select a container that will allow people to see what your habitat looks like. An empty aquarium works well, a large box with one side cut out of it, or a large see-through plastic box. Your teacher may provide the container, or you might have to find one yourselves. Make sure it is big enough for you to display your organisms. For instance, a shoe box may be too small.

The organisms: You will need to decide which organisms you are going to display in your habitat. Look in books and on the internet for pictures of habitats to get an idea of how your habitat should look, then select organisms from the poster that was made in Activity 5. You should try to have organisms from each trophic level.

The materials: Once you have decided how your habitat will look, what type of container you will use, and which organisms you will display, you need to start gathering the materials you will need. You can use pictures, sand, small containers of water, shells - anything your imagination can come up with. Bring all your materials to class on the assigned construction day. [Please don't allow students to collect items from the Reserve as it is against the public resource code]

3. Now that you have gathered all your materials, it is time to construct your Virtual Habitat. Be sure to label everything you put into your habitat. Use colored pencils, markers, and construction paper to make a background scene on the inside of your box, and put your "organisms" in their proper place.
4. Once your habitat is finished, you will need to write a short paper about your habitat. Using information you have learned in this chapter, and in chapter 1, explain the biotic and abiotic factors in your habitat, how those factors affect the organisms you are displaying, the flow of energy through your habitat, and the soil and water conditions in your habitat.
5. Be prepared to present your habitat to the class.