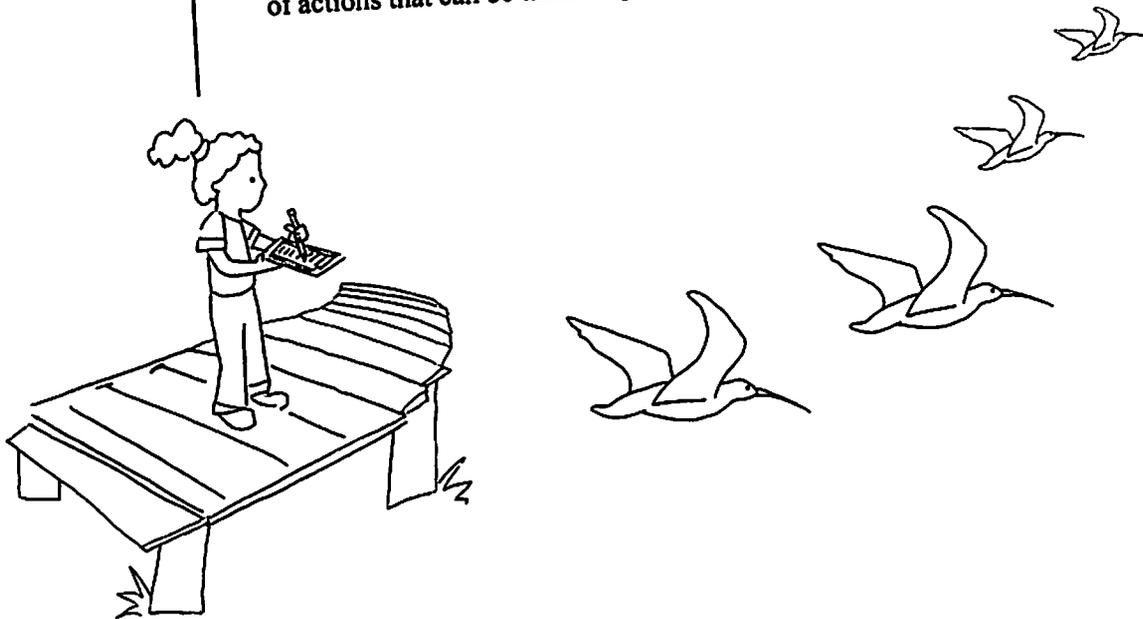


## GOALS AND CONCEPTS OF ENVIRONMENTAL EDUCATION

### REASONS FOR COMING ON A FIELD TRIP

- To learn about the wildlife habitats, plants, and animals of Don Edwards San Francisco Bay National Wildlife Refuge.
- To understand the Refuge's resource management objectives, how Refuge staff accomplish these objectives, and how students can help the Refuge.
- To develop an appreciation for the natural environment and become aware of actions that can be taken to protect that environment.



### THE GOALS OF ENVIRONMENTAL EDUCATION

- **Awareness:** to help individuals and groups acquire an awareness and sensitivity to the total environment and its interactions;
- **Knowledge:** to help individuals and social groups gain a variety of experience in and acquire a basic understanding of the environment and its associated problems;
- **Attitudes:** to help acquire a set of values and feelings of concern for the environment and the motivation for actively participating in environmental improvement and protection;
- **Skills:** to help acquire the tools for identifying and solving environmental problems;
- **Participation:** to provide people with an opportunity to be actively involved in all levels of working toward the resolution of environmental problems.

## BASIC ECOLOGICAL CONCEPTS

Discuss the ecological concepts with students before your visit to the refuge. A basic understanding of these concepts will enhance the group's understanding of what they see and do on the field trip.



- **EVERYTHING HAS A HOME**

During your field trip, you will be walking in, around and through several animals' living rooms, dining rooms, kitchens, bedrooms and bathrooms. We call these homes habitats. Ecology (from the Greek "oikos" which means house) is the study of the common home of all life—the earth.



- **EVERYTHING IS BECOMING SOMETHING ELSE**

All plants and animals undergo evolutionary changes and adaptations. When things die, they are broken down, decomposed, recycled and used by other living things.



- **EVERY LIVING THING EATS AND IS EATEN BY SOMETHING ELSE**

Three categories of life forms are in the basic food cycle: producers, consumers and decomposers.



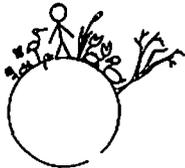
- **EVERYTHING DEPENDS ON SOMETHING ELSE**

Interaction and interdependence occur among living and nonliving things and their environment. A change in one strand of the food cycle of life affects the entire web. Nothing exists in isolation.



- **THERE ARE BASIC NECESSITIES FOR LIFE: FOOD, WATER, SHELTER, SPACE**

These necessities are found in the atmosphere (air), the hydrosphere (water) and the earth's crust (soil). The biosphere is the thin skin of the planet where these zones collectively support life on earth.



- **DIVERSITY IS ESSENTIAL FOR LIFE**

Many similarities and differences occur among living and nonliving things. This variation is essential for maintaining a healthy community and ensuring that plants and animals survive and reproduce in spite of changing situations.



- **HUMANS ARE CAPABLE OF CHANGING THE BALANCE OF NATURE**

We are rational, thinking beings that have changed and continue to alter the environment of the earth in many profound ways. As such, we have a responsibility to all living things.