

SSI Conservancy Stewards in Training Program

Overview for Teachers

TOPIC: Water environments

THEME: Ganges Harbour water environments (inflowing creek, estuary, dockside)

At the end of the program students will be familiar with:

- ✧ The measurement of water quality, including salinity, pH, temperature, dissolved oxygen and turbidity in marine and freshwater environments
- ✧ Differences in water quality and species between freshwater, estuarine and marine habitats
- ✧ The use of a microscope, and how to make a wet mount slide
- ✧ Microscopic plankton in the ocean and macro-invertebrates in freshwater through examples observed
- ✧ A systematic view of the interconnectedness of life through Ecospherotron images

Program Layout:

This program involves three 90 minute sessions, and a final 45 minute session.

Session 1: Classroom – Introduction to Water as a System (Earth’s water - marine and freshwater); introduction to water chemistry tests; construction of field journal

Session 2: Classroom and Field – Predictions on water quality parameters; field sampling (creek, estuary, 2 different dock locations); review of field results

Session 3: Biology lab at highschool – Using microscopes to view marine plankton, and dissection microscopes to view freshwater invertebrates

Session 4: Classroom – Review of program, interpretation of Ecospherotron images as systematic view of Earth life processes

CONSERVANCY NEEDS FROM THE TEACHER

1. Scissors, glue sticks and pencil crayons/markers for the construction of the field journal during session 1.
2. A class list of students’ names sorted into four groups.
3. Recommended prerequisite science lessons to the Water Systems program: understanding salinity; how to use a microscope; how to make a wet mount slide.
4. Names of any parent volunteers.
5. Optional: Consider assigning a photographer and reporter from each class to document the program – for potential use in SIMS profiling, local newspaper, local cable TV channel.