

# ECOSYSTEMS

## MAIN OBJECTIVES

- Gain an understanding of how an ecosystem works
- Use of critical thinking
- Collaboration and Communication
- Discuss various ecosystems

## ACTIVITY

Build a self contained Biosphere, observe water cycle principles, understand interactions between all plants, organisms, elements contained within the “mini-world”, and compare their observations with real world ecosystems.

## MATERIALS

2-liter bottle, salad container, other clear container

Soil, sand, small pebbles

Water

Small organisms (worms, insects, snails, etc.)

Plants, vegetation

Tape, glue, foil, plastic wrap

String, wire

Scissors

## CURRICULUM COMPONENTS

- 3.L.2.2 Explain how environmental conditions determine how well plants survive and grow.
- 3.L.2.4 Explain how the basic properties (texture and capacity to hold water) and components (sand, clay and humus) of soil determine the ability of soil to support the growth and survival of many plants.

### Vocabulary:

Seed, Seedling, Roots, Stem, Leaves, Flowers, Environment, Life cycle, Soil, Sand, Humus, Survive, Texture, Capacity, Retention, Drought, Stages, Conditions, Components, Synthesize, Environmental Conditions

- 5.L.2.1 Compare the characteristics of several common ecosystems, including estuaries and salt marshes, oceans, lakes and ponds, forests, and grasslands
- 5.L.2.2 Classify the organisms within an ecosystem according to the function they serve: producers, consumers, or decomposers (biotic factors).
- 5.L.2.3 Infer the effects that may result from the interconnected relationship of plants and animals to their ecosystem
- 5.P.2.1 Explain how the sun's energy impacts the processes of the water cycle (including evaporation, transpiration, condensation, precipitation and runoff).

### Vocabulary:

water cycle, evaporation, condensation, precipitation, runoff, weight, transpiration, biotic, abiotic, oceans, lakes, ponds, ecosystems, terrestrial, aquatic, estuary, salt marsh, grasslands, food chain, food web, producers, consumers, decomposers, fertile, species, deciduous forest,