The Arboretum
LOS ANGELES COUNTY ARBORETUM & BOTANIC GARDEN

Plants In Our World

Occupying the heart of the historic Rancho Santa Anita, The Los Angeles County Arboretum & Botanic Garden is a unique 127 acre historical museum and botanic garden located in the city of Arcadia. Home to plant collections from all over the world, including many rare and endangered species, the Arboretum also houses outdoor historical landmarks representative of the major phases of California history.

The Arboretum is also an animal sanctuary. In addition to The Arboretum's famous peafowl, visitors will see species of resident and migratory birds, aquatic creatures, as well as numerous species of small reptiles and mammals.

The Arboretum peafowl roaming the grounds are descendants of a pair imported by "Lucky" Baldwin from India in the 1880's. Males (peacocks) have a bright blue neck, but only during the mating season do they display their long trains. Both peacocks and the brown-colored peahens (females) can fly short distances, often roosting in trees at night.

Please do not touch, chase, or feed any of the animals you see in the garden. When you feed Arboretum animals you are giving them the wildlife equivalent of junk food. Rather than eating a variety of natural foods, they become dependant on processed foods that are not a part of their natural diet.

This field trip is a learning experience and ***your preparation before the scheduled day*** will make it a more rewarding adventure.

Topics of Discussion Include:

1. Indian uses of native plants
2. Arboretum wildlife
3. The structure of plants
4. How plants make their own food
5. How plants reproduce
6. How plants and animals relate to each other
7. Conserving our natural resources
8. The important uses of plants

Words to Learn in Preparation for Your Trip

Adaptation – Adaptation is the change in living organisms that allow them to survive in a particular environment. Adaptations can be structural, behavioral or physiological.

Angiosperm - The most recent of the major plant groups. These plants are characterized by flowers and fruit.

Arboretum –An arboretum is a botanical garden containing living collections of primarily trees intended for display, preservation, and scientific study.

Botany – The scientific study of plants. A scientist who studies plants is a *botanist*.

Carbon Dioxide – CO_2. One molecule of carbon and two molecules of oxygen combine to make this invisible gas that people (and other animals) exhale. Plants take in this gas as part photosynthetic process. It's also the fizz in your soft drink!

Carnivores – Animals and a small number of plants and fungi that get most of their nutrition from eating the flesh of animals.

Chlorophyll – The green molecule in plants that absorbs energy from light. Chlorophyll is involved in photosynthesis.

Environment – includes all the biotic (living) and abiotic (non-living) factors surrounding an organism, i.e. plants, animals, climate, soils.

Flower – The reproductive structure of a flowering plant. Flowers may contain only female structures (stigma, style, and ovary), male structures (stamen and anthers) or both. The color, scent, and shape of flowers attract pollinators (bees, bats, flies, etc.).

Food Web – describes the feeding relationship between species living in the same environment.

Fruit – The ripened ovary of a flower, which contains the fertile seeds that will grow into new plants. A tomato is a fruit because it contains seeds.

Gymnosperm- The first seed bearing plants to evolve. The seeds are usually arranged in a cone-like structure. This group contains conifers, cycads, and ginkgos.

Habitat – The area or type of area where a particular plant or animal is found.

Herbivore – An animal that derives its nutrition solely from plant sources.

Leaves – Primary site of photosynthesis.

Native Plants – Plants that occur naturally in a given area. In contrast, exotic species are plants from other places.

Omnivore – Animals that derive their nutrition from both plants and animal flesh.

Organism – An organism is a living thing that grows, reproduces, and evolves.

Oxygen – An important element that is a byproduct of plant respiration. Though it forms only 21% of the air we breathe, oxygen is essential for maintaining life on our planet.

Photosynthesis – Plants make their own food (carbohydrates) through a process called photosynthesis (which means "make from light"). Photosynthesis uses water, carbon dioxide, and the energy from sunlight to produce these carbohydrates which are then converted by the plants into sugars for growth and reproduction. Although the primary site of photosynthesis is the leaves, any part of the plant containing chlorophyll (giving it a green color) is capable of undergoing photosynthesis.

Plants – Living organisms belonging to the kingdom Plantae.

Pollination – A process in which pollen is transferred, primarily by wind or animals such as insects and birds.

Rainforest – A dense forest that develops in areas near the Equator characterized by warm temperatures, abundant rain, and no difference in seasons.

Reproduction – process in which new plants are produced. Plants are capable of sexual reproduction (involving seeds or spores) as well as asexual (vegetative) reproduction.

Spore – A spore is the reproductive structure in plants such as ferns and mosses, as well as algae, fungi, and some protozoans.