

# Adopt a Tree

California State Content Standards:

Science 4.2 All organisms need energy and matter to live and grow.

a. plants are the primary source of matter and energy entering most food chains.

b. producers and consumers (herbivores, carnivores, omnivores, and decomposers) are related in food chains and food webs, and may compete with each other for resources in an ecosystem.

Science 4.3 Living organisms depend on one another and on their environment for survival.

a. ecosystems can be characterized in terms of their living and nonliving components.

Science 4.5 Waves, wind, water, and ice shape and reshape the Earth's land surface.

a. some changes in the Earth are due to slow processes, such as erosion, and some changes are due to rapid processes, such as landslides, volcanic eruptions, and earthquakes.

c. moving water erodes landforms, reshaping the land by taking it away from some places and depositing it as pebbles, sand, silt, and mud in other places (weathering, transport, and deposition).

Directions:

1. Choose an area of your school that has several large trees.
2. Assign students in small groups to observe a tree.
3. Students should observe the tree over several seasons.
4. Over time, students should observe changes in number of leaves, times of flower formation, and times of seed or fruit formation (even in mild climates) using the booklet provided.
5. Science topics about ecosystems and erosion can be incorporated into the discussion.
6. Students can report their data about the time of flower formation to: first bloom.

Students can use: Ecosystem Handout (below), Tree Handout (below), and Descriptive Words for Trees (below).

## Ecosystems

- \* Ecosystems can be large or small (the rainforest in Brazil or a tree branch).
- \* Ecosystems are made up of living and non-living things (examples -- living: animals, plants, fungi or non-living: soil, rocks, water, and air).
- \* The parts interact (work together) for the whole system to work.
- \* The living things in the system need to have enough food, water, space and air or they will die.



## Why Do We Need Trees?

1. Trees create the air (oxygen) we breathe.
2. Trees help water soak into the soil so it goes into wells and rivers.
3. Trees help clean the air and water.
4. Trees hold the land in place to keep erosion from happening.
5. Trees provide homes for animals.
6. Trees help the weather happen in the right places.
7. In cities, trees help keep the noise level down.
8. Around your home, trees can keep it cool in the summer.
9. Many trees provide food, firewood and other things people need.
10. Trees may help fight climate change.



## Descriptive Tree Words

Remember to use colors in addition to the words below!

Bark: rough, smooth, lines, grooves, limb, trunk, branch,  
twig, stem, sprout, bud

Flowers: petals, pistil, stigma, style, anther, filament,  
stamen, pollen, nectar, bud

Leaves: smooth, waxy, edge, veins, stem, branch, fingers,  
blade, fuzzy, round, heart, oval

Fruit/Seeds: spiral, cone, fruit, flesh, seed, flat, round,  
pod, bean, pit

