

Reflection Section



- ✿ This research identified the amount of CO₂ emitted by equipment that was used to maintain urban trees. What might happen in the future to the design of the equipment used to maintain urban trees? How could that change affect the scientists' research?
- ✿ If people want to increase the amount of CO₂ that is absorbed in urban areas, should they plant more or fewer urban trees?
- ✿ Of the tree species characteristics in figure 4, which kind of species should they plant?

Discussion

We often consider doing things without looking at the complete picture. The scientists in this study suggest that people should think carefully before selecting an urban tree species to plant. People should compare the amount of carbon that the tree will absorb with the amount of CO₂ being emitted when the tree is planted and maintained using machines.

The scientists suggest that people should plant urban trees that live a long time and grow either fast or moderately fast. They also suggest that people use machines that are energy efficient, or they should do some of the things by hand. ■

Reflection Section



- ✿ This study looked at how much CO₂ was emitted by engines used to plant and maintain urban trees. What is one way that CO₂ emissions could be reduced without changing the type of tree species being planted?
- ✿ This study examined the advantages and disadvantages of planting and maintaining different urban tree species for balancing CO₂. What might be some other advantages and disadvantages of different tree species?

From Nowak, D. J., Stevens, J. C., Sisinni, S. M., and Luley, C. J. (2002). Effects of urban tree management and species selection on atmospheric carbon dioxide. *Journal of Arboriculture*, 28(3):113-122.

FACTivity



As a class research project, create a list of different types of native trees for the area in which you live. In groups, research each tree and find out how long the tree lives and how fast it grows as well as leaf type, special characteristics of the tree, etc. Your group should make a presentation about your tree. After all of the presentations have been made, your class should vote on which type of tree to plant in your schoolyard. The tree should be successful in your particular schoolyard environment.

Teachers—

A possible extension to this Factivity is to have students engage in a service learning project. After researching the trees and voting on type of tree to plant, students can go out into the community and find businesses that would be interested in helping to plant urban trees. Schools could get businesses to donate funds to buy trees appropriate for the area and the students could plant them.