

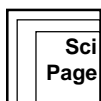
## RAISED BEDS Teaching Tips



### LEARNING OBJECTIVES

Youth will be able to:

- \* Describe what a raised bed is.
- \* List the advantages of raised beds.
- \* Evaluate the appropriateness of raised beds for a particular situation.
- \* Describe how to create a raised bed, including the best size to make it, and how to prepare the soil.



### HOW TO USE THE RAISED BEDS SCIENCE PAGE

Ask youth if they know what a raised bed is, and what the benefits of using a raised bed are. List their ideas on a chalkboard or on a large sheet of paper. Then ask youth how they would go about building a raised bed. Pass out the Science Page, and tell youth that in it they will find some information on the advantages of raised beds and how to build them. Give youth some time to read the front of the Science Page, and then ask them if they have changed any of their ideas about raised beds, and if so, how.

Have youth discuss whether or not they think raised beds would be advantageous for people in your local community garden, and if so, how a raised bed should be built in that particular location. (The best way to make a raised bed on a city lot is described under step 1 on the Science Page, and the best way to make a raised bed where there is existing soil is described under step 2 on the Science Page.) Ask: In what kinds of soils would raised beds be particularly useful? (Answer: In areas that have poor or contaminated soil or poor drainage.) Ask: Why would raised beds be especially useful for disabled and elderly gardeners and for young children? (Answer: It's easier for handicapped and elderly

people to tend the garden when it is raised above the ground level, because they do not have to do as much bending. Young children find it easier to garden without stepping on plants and the soil within raised beds, because the beds provide a clear demarcation between paths where you can step, and crops and soil where you should not step.) Ask: How should the soil in a raised bed be prepared for planting? (Answer: Mix a lot of organic matter into the soil. Also, if the bed is on hard, compacted soil, make sure to loosen the existing soil to a 15 cm depth, and work some good soil into it before adding topsoil to the beds.

If raised beds do not exist in the community garden, youth may want to undertake a raised bed demonstration project for gardeners. They would need to assess the best type of raised bed to use for the soil conditions and gardeners at the site. Youth would also scout out sources of materials that could be used to frame the beds. Warn youth that old railroad ties and treated lumber should not be used because chemicals can leach out of them and injure plants.



### CROSSWORD PUZZLE

#### Answers

Across: 4. plant; 5. raised beds; 7. paths; 8. bend.  
Down: 1. compost; 2. wet; 3. rake; 4. planks. 6. drain.



### TRY THIS

To compare the soils inside and outside raised beds, youth will need to know how to test soils. This information can be found in the following Science Pages: testing soil texture in the Soil Texture Science Page; measuring soil pH in the Soil pH Science Page; assessing the amount of soil

life in the Soil Life Science Page; and testing for soil drainage using the perc test in the Water in the Garden Science Page. You may wish to make copies of these instructions for youth to use in their investigations. Ideally, they should have already done the activities in these Science Pages. Explain to youth that they can compare the amount of organic matter in two different soils by examining the color and the texture of the soil.

Talking to gardeners may reveal information on how to effectively use raised beds. For example, if a gardener has especially productive raised beds, youth could find out how they were built and how the soil in them was prepared.

If youth have discovered information that would be useful to gardeners, they should be encouraged to present their findings in a poster or report that can be posted at the garden.



### SPOTLIGHT ON RESEARCH

The information for this spotlight is drawn from: Erickson, C.L. "Raised Field Agriculture in the Lake Titicaca Basin: Putting Ancient Andean Agriculture Back to Work." *Expedition*, 30(3):8-16. special issue on Andean Archaeology. Ed. Mohr Chavez, K. The University Museum, University of Pennsylvania, Philadelphia, 1988.

Due to the success of the Andean project, archeologists at the University of Pennsylvania, led by Clark L. Erickson, have since undertaken further studies of ancient raised bed agriculture systems in the Amazon Basin in South America. Reports on these studies and the Andean study, including interesting photographs of the raised beds, can be downloaded at this website: <<http://www.sas.upenn.edu/~cerickso/articles/articles.html>>