

Introduction

Landscaping around buildings, such as growing plants and trees, can improve comfort inside a building. Well-designed landscaping can block cold winds, cool hot summer winds, shade hot walls or reduce reflected sunlight. Deciduous trees and vines can provide shade in the summer and let in warming sunlight in the winter. It is even possible to create a pleasant outdoor, learning space.

Exploring design ideas

To explore where plantings or structures might be positioned to improve comfort inside a building.

Equipment

You will need:

- two model buildings/boxes sealed with tape
- two thermometers
- material to make a model tree big enough to shade one of the buildings/boxes
 - i. an oval shape cut from a large sheet of cardboard
 - ii. a stake or stick for the trunk of a tree – pointed at one end for driving into the ground.

Process

Make a model tree from the cardboard oval and the stake.

Find a sunny spot in the playground to position both buildings/boxes in full sunlight. Make a small hole and insert a thermometer in each box.

Place the model tree so that it completely shades one of the boxes. Measure the temperature in both boxes after 30 minutes.

Thinking creatively and solving problems

What was the temperature in each box after 30 minutes? In which box was the air cooler?

Where would you position trees or structures to save energy in your school space by reducing the need for air conditioning or fans?

What would happen in winter time? How could this problem be overcome?

Ideas from other places

Does the following image of a Sydney street give you any ideas?



Consider creating a 'green wall' for your school? Research and planning will be important before starting!



Now reflect on opportunities to provide energy saving landscaping for your school space.
