



Shade for Kids: Fact Sheet 4

Selecting Trees

Tree Form and Size

It's important to consider tree form and size at maturity when thinking about which species to plant. Trees with broad crowns and dense foliage provide the greatest protection from UVR. But trees with narrow form can be planted in a mix of broad and narrow shapes to achieve higher rates of coverage. Columnar and ovate trees are better in tight narrow spaces along school buildings.

Here is a sample list of the best shade trees for school grounds. For more information consult a local arborist or visit **Evergreen's Native Plant Database** for a list of shade trees appropriate for your ecozone <http://www.evergreen.ca/nativeplants/>.

Best Shade Trees: Sugar maple, Red maple, Silver maple, White ash, Tulip tree, White spruce

Tip: Larger trees have a greater chance of survival in the high-traffic school environment. Individual deciduous trees should have a trunk width or caliper of between 70 and 75mm with a 1.75 to 2.15m clear stem (no branching) from the base of the trunk to the first set of branches. Coniferous trees should be 2.5-3m tall.

For planting details, see pages 70-74 in *School Ground Greening: Designing for Shade and Energy Conservation*.

Resources

Designing for Shade and Energy Conservation. 2004. TDSB and Evergreen.

Evergreen's Native Plant Database: www.evergreen.ca/en/nativeplants

Canopy Density Guide (over)

This guide helps you assess the existing level of UVR protection from trees on your site. Then you can figure out how much more you need.

▶ CANOPY DENSITY GUIDE

The canopy density guide will help you assess the level of UVR protection provided by different trees.⁷

View the tree canopy against the sky and compare with illustrated leaf/canopy patterns.

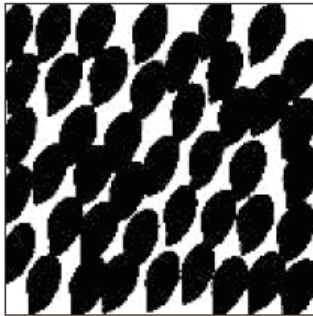
Estimate which pattern of sky and leaves most closely approximates the observed canopy.



Heavy – over 90% UVR protection

[all Maples, White Ash, White Spruce etc.]

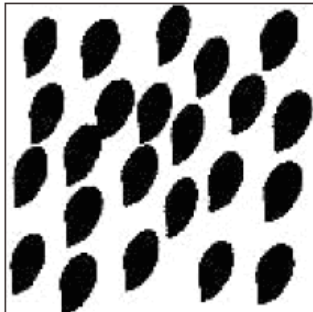
Good protection from direct UVR. Protection from indirect UVR will depend on canopy size and where a person is positioned under the canopy. Suitable for long-stay use if personal sun protection measures are also used.



Medium – around 60% UVR protection

[Kentucky Coffee, Hackberry, White Cedar etc.]

Filtered shade provides low level of protection from direct and indirect UVR. Suitable for short-stay use only. Personal sun protection measures should also be used.



Light – less than 30% UVR protection

[Black Locust, Nannyberry, etc.]

Poor protection from direct and indirect UVR. Suitable for transit shade only.

⁷ J.S. Greenwood, G.P. Soulos and N.D. Thomas, *Undercover: Guidelines for shade planning and design*. Sydney: NSW Cancer Council and NSW Health Department, 1998, p. 76.