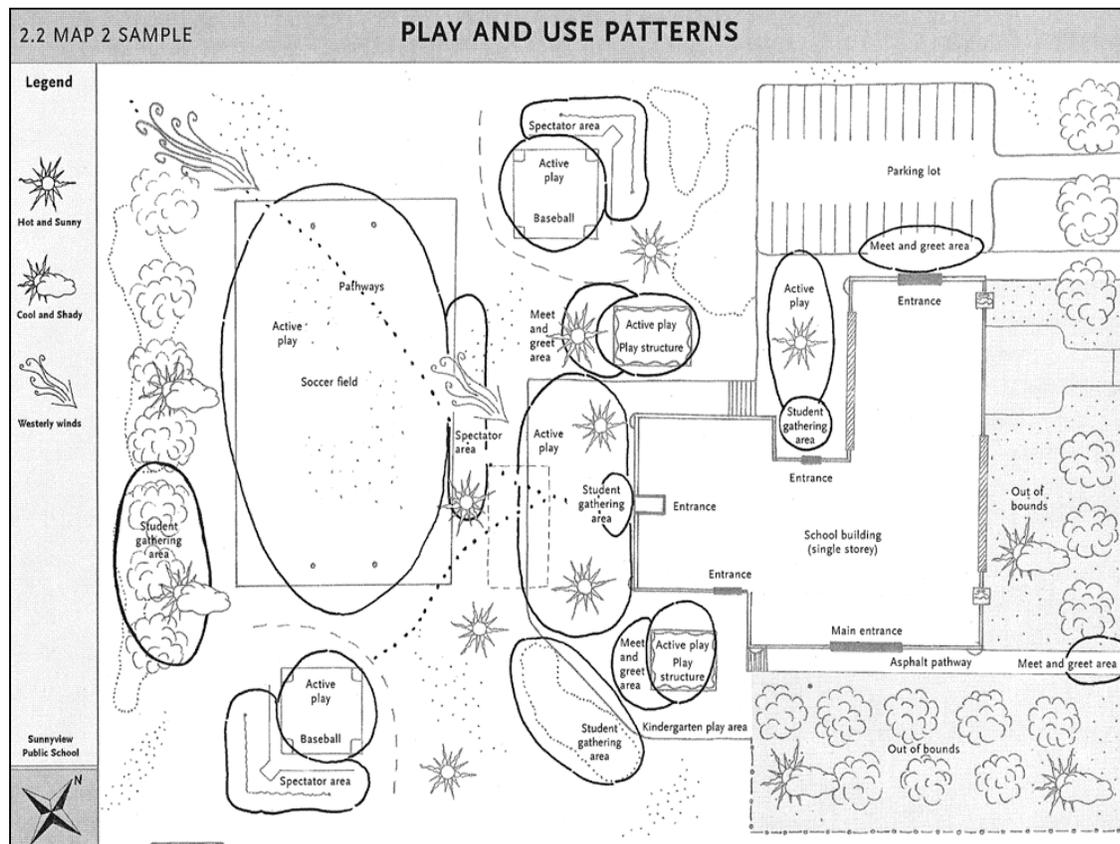**Shade for Kids: Fact Sheet 5**

Designing for Shade on Your School Ground

Where do children play?

A map that shows the play and use patterns of your site will help you design for effective shade. Using a copy of your school plan with the physical and environmental features of your site labeled, circle the following zones and shade them with different coloured pencils:

- *active play areas (sports fields, baseball, sandpits, etc);*
- *asphalt game areas (basketball, four square, hopscotch, wall ball);*
- *passive/quiet play areas (gathering spots, benches, seating);*

- *circulation routes where people walk, including naturally worn pathways across grass;*
- *'out of bounds' areas where students aren't allowed to be during school hours.*
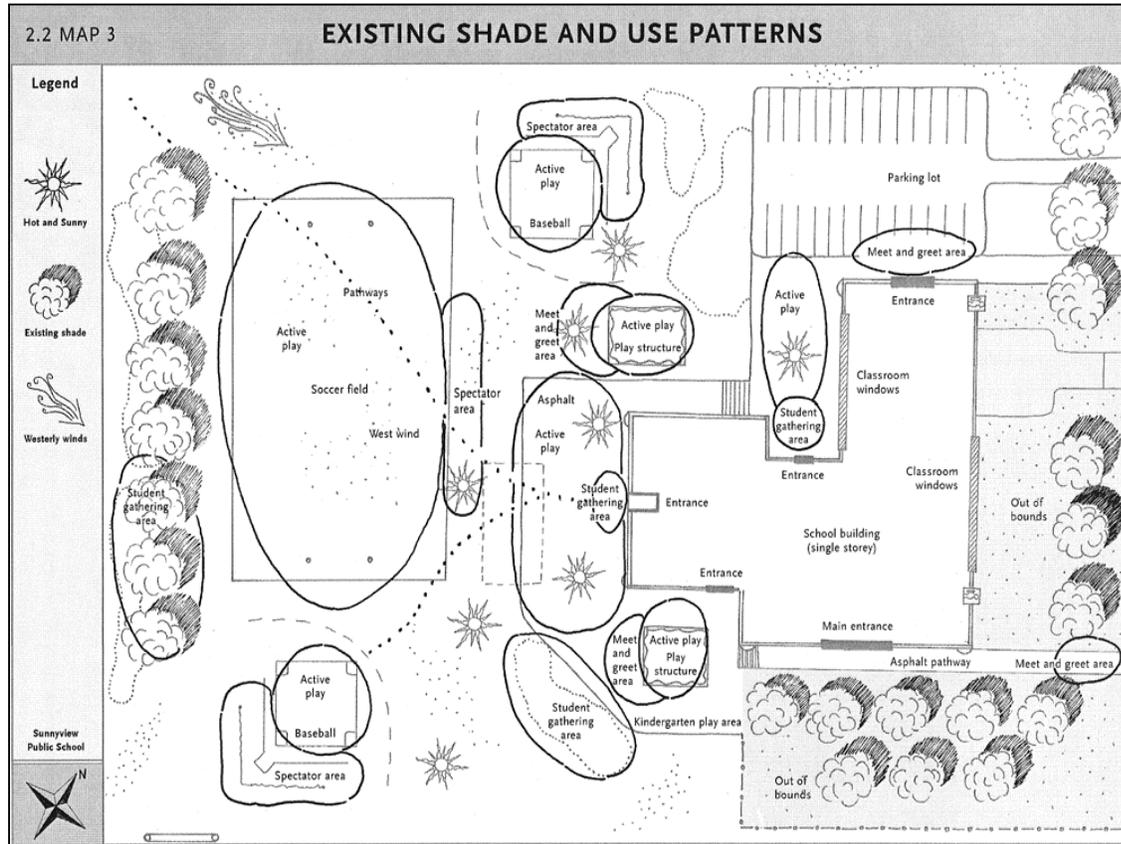

Maps and Illustrations: Samara Newman

Make note of (1) the student activities that take place in these zones and (2) the age group of students involved.

Where is the shade – in the morning, at noon and after school?
Using a copy of the play and use patterns map (above), go out to the school grounds at noon and map where the existing shade is. Remember to include shade from the school building and any portables and existing structures.

2.2 MAP 3 — EXISTING SHADE AND USE PATTERNS

Analyse the results
Look at your maps, showing where students play, where parents meet and pick up their children, where outdoor classes are held. Which areas need shade? You may find it helpful to chart your findings.
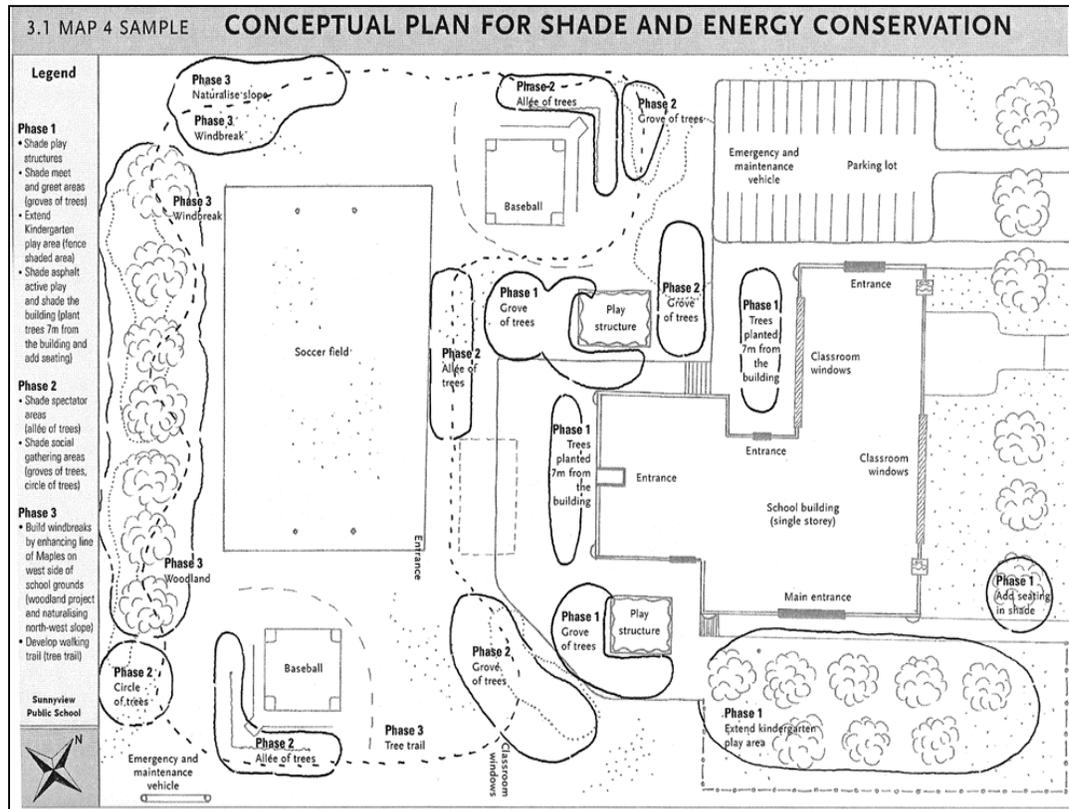
Area	Sufficient Shade	Increase Shade	Time of Day Shade Needed	Comments
1. Active play areas		X	12:00	Asphalt play area to be shaded
2. Play structures		X	12:00 – 2:30	Plant trees on west side of structure
3. Meet and greet areas		X	9:00 and 3:30	Plant trees at bus pick-up zone
4. Spectator areas		X	12:00 – 4:30	Plant trees with benches for seating
5. Sand play areas	X			

Create a Conceptual Plan

The conceptual plan helps identify priority areas, and potential phases for your project. Looking at your whole school ground is important to develop a vision that represents the goals and objectives of your school community.

Tips:
- use or build on existing shade
- quality of shade matters: large-leafed trees such as maples give dense shade, providing the greatest UVR protection. See Fact Sheet 4 for canopy densities and a tree selection guide.

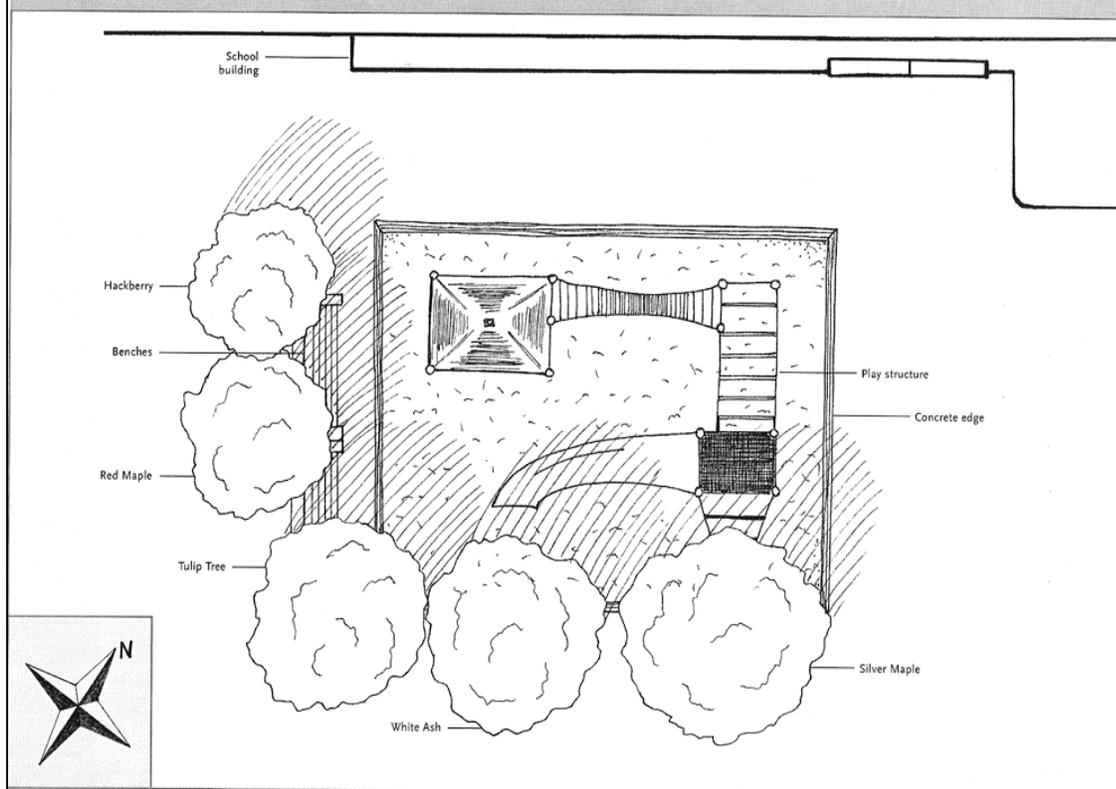3.1 MAP 4 SAMPLE — CONCEPTUAL PLAN FOR SHADE AND ENERGY CONSERVATION

Create a Phase One Site Plan

What area will your school and committee focus on first? What type of shade is needed – built, natural or a combination? See Fact Sheets 2 and 3 for ideas.

Elements of a phase one site plan include:
- The **location** of your project in relation to the school building
- A **planting plan**, marking the location of the trees and the shade they will cast
- A **species list** of trees and shrubs with common and botanical names
- A **materials list** of the built and natural elements incorporated into your design, such as rocks for seating, wood for a gazebo, or a shade sail.

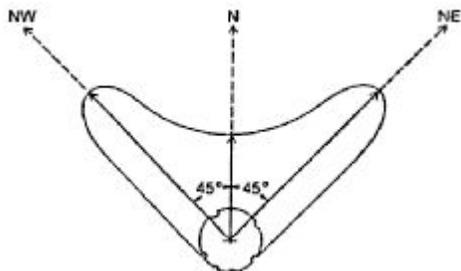**3.2 SAMPLE** **PHASE ONE: SHADING THE PLAY STRUCTURE**

Make sure shade is where you want it when you want it

Where does the shade fall? When creating your phase one site plan, use the tree shadow template to make sure shade is being cast where you want it when you want it.

To determine the tree shadow:

1. Place a circle on your site map to represent the tree.
2. Draw a line from the center of the tree toward North on the map.
3. Place two more lines at a 45° angle from the centre line.
4. The shade from the tree will fall between the 45° angles at noon.

Resources

School Ground Greening: Designing for Shade and Energy Conservation. 2004. TDSB and Evergreen.
Evergreen's website: www.evergreen.ca
Shelter strategies website: www.shelterstrategies.com.au