

Assessing Shade in Child Care Programs

Why is it important to consider shade?

It is important for child care programs to assess shade in areas where children commonly play or regularly spend time. Ultraviolet (UV) radiation from the sun can be harmful, and too much exposure can cause sunburn, pain, and blistering skin. UV radiation cannot be seen or felt and can lead to damage and aging of the skin and eyes. UV radiation has also been shown to suppress the immune system and increase the risk of developing of skin cancer.

Due to the nature of outdoor play activities, children are not always able to seek shade for protection. Educators and care providers should consider shade when planning for outdoor environments and play periods by looking at shade that currently exists; by considering ways to reduce UV reflection; and by increasing the amount and quality of shade through natural and built structures.

Peak exposure to sun: As reflected in the [Ministerial Requirements for the Daily Program](#), the peak period when the sun is strongest is between 11:00 am and 3:00 pm and it is during these times that time in the sun should be avoided. Play activities can be scheduled inside or in areas that have adequate protection from the sun. The quantity and quality of shade should be considered.

What is a shade audit?

By observing existing shade and identifying where additional shade may be needed, you can determine where new shade structures can be added. If current shade is considered inadequate, shade audit results will help determine shade options for your child care program.



Shade Audit Steps

Step 1: Interview stakeholders to gather information. Ask educators, families, and children how they feel about the sun and heat when using the space. Confirm how the space is currently used and at what times of day.

Step 2: Observe the site throughout the day, at different times, noting the position of the sun and when UV is at its highest. Consider patterns of use, surface materials, ground cover, and shade as these can impact temperature and UV reflection. Consider if current shade is providing protection from the sun.

UV intensity and UV reflection: During the year, the sun's angle varies, which causes the intensity of UV rays to vary. UV intensity is highest during the spring and summer months. But the sun can still have an effect on the skin and eyes in the fall and winter. Reflections from bright surfaces like snow, water, sand, and concrete can increase the effect of UV rays. For example, fresh white snow reflects up to 85% of UV radiation. (Source: [Environment Canada](#))

Step 3: Explore shade options and access to available shade. How can improvements to accessible and adequate shade be made available? Consider both short- and long-term solutions.

Assessing available shade

Use your interview and site observation data (steps 1 and 2) to assess the quantity and usability of existing shaded areas. Then determine if additional shade is needed and how to create it.

Key things to consider

Quantity

- How much shade is present during the peak UV protection times (11 am – 3 pm)?
- Is shade protection adequate for the number of people using the site? Is more shade needed?
- Are there ways to make better use of existing shade?
- How much shade is provided by existing trees during the different seasons?

Location

- Is the location of existing shade appropriate, given how the site is used?
- Is there enough shade in high-use areas?
- Are there shade options even in low-use areas? Should/can existing shade be moved to better match how the space is used/usage patterns?

Quality

- Do existing shade structures provide effective protection from the sun?
- Do existing trees provide adequate protection from the sun when used for shade? Are the trees healthy?

Impact

- What are the different surfaces accessible to children in the play space? Are any high risk for UV reflection?
- How does the ground cover impact UV radiation at different times of the year?
- How can UV reflection be reduced at the site?
- What is the impact of future tree growth on the amount of shade at the site? Will this significantly alter the amount or distribution of shade? How long might it take for the tree growth to provide adequate shade?

Assessing opportunities to enhance shade

Does your site assessment show that additional shade is required?

If so, here are some questions to consider for enhancing available shade:

- Is there shade on your site that people cannot access? Is there a way to enhance access to existing shade?
- Are there high shade areas that could be better used?
- Could activities be rescheduled to take advantage of shade between 11 am and 3 pm (peak exposure times)?
- Could structures such as playground equipment, benches, and tables be moved to more shaded locations?
- Can new shade structures be designed and installed to provide shade to high-use areas?
- Can trees be planted to build on existing shade and increase areas of usable shade?



Next steps

Once you determine what you have and what you would like to enhance, it's time to prioritize.

- Create a plan outlining what areas of the space/schedule are in the highest need to provide the children with safe outdoor play opportunities. Address these areas first.
- Consult with stakeholders for ideas and solutions around scheduling and sharing prime outdoor time.
- Determine the resources needed to fulfill the plan: who will be involved, equipment, materials, etc.
- Ensure plans are run through appropriate approval processes (EECD licensing services, municipal building codes, etc.) before building, digging, or planting.

Consider re-engaging your stakeholders to implement the plan. Working together to create a space that is shaded and safe for children to play is beneficial to both educators, care providers, and families. Children who are part of the process are actively learning about the importance of protection from the sun.