

Explore sun, shade and shadows

Sun, shade, and shadows can provide a focus for schoolyard explorations in thermodynamics and solar energy and the passage of time, or can even provide inspiration for artistic activities. Use these phenomena to practice documenting and describing sequences of events and places or locations.

GRADE: ECE/Kindergarten

INTENDED OUTCOMES: feet, head

SUGGESTED SUPPLIES:

- Paper and markers or sidewalk chalk (ideally enough that each student can use each of 3 or 4 colors)

ACTIVITY OPTIONS:

- Track the passage of time
 - Using one color of sidewalk chalk, have students trace the shadows of a tree, bushes, a play structure, etc. on the ground.
 - Some interval of time later (30 minutes, an hour, 3 hours, etc.), go out and do this again with a different color chalk. (Help students remember which plant or object they traced so they can use the same one again).
 - Repeat until you have a record of how the shadows have moved over the course of the day. (It’s okay if the tracings from one session overlap with another.)
 - For a creative addition, transfer the resulting chalk patterns to paper by placing a paper on top of them and rubbing the paper until it picks up the chalk. You can also do the drawings on paper to begin with but make sure you tape the paper down so that your sessions stay accurately spaced from each other.
- Play with hot and cold
 - Make a game by having students run between “hot” or warm areas (i.e. a sunny spot on the blacktop) and cool areas (i.e. a shady spot on the grass), as you call out, “Hot” and, “Cold.”
 - Ask students what they notice about these areas - what makes them different? Is one in the shade and one in the sun? One under a tree and one on the blacktop? What makes an area hot or cold? Where does heat come from?

*For more detail on the grade-level focus for natural and social concepts and sense of place, please refer to the Guidelines

TIPS AND TRICKS

- Obviously this works best on a sunny day - though once you've done it, taking them out to notice and experience the lack of shadows on a non-sunny day is interesting too!
- If you are interested in making this more technical for older students, try placing a container of water with a thermometer in it different areas (shady vs. sunny) to add a more quantitative aspect to the activity.



Relevant Standards

SC09-GR.P-S.3-GLE2, SC09-GR.KS.3-GLE1