



**Learning Math and
Science Through Play**

Light and Shadow

Experiment with light and shadow on a sunny morning!

What You Will Need:

- Sidewalk chalk
- Sidewalk, concrete patio, or other smooth outdoor surface
- Sunny day
- Clock



Here's What To Do:

- Find a sidewalk, concrete patio, or other smooth outdoor surface.
- Trace your child's shadow with sidewalk chalk. Your child can trace your shadow too!
- Write the time of this activity next to the shadows
- Return later in the day and see if the shadows still fit inside the tracings.
- What do you think happened? You can retrace the shadows in their new position and write the current time.

Now Try This:

- Ask your child to try chasing his or her shadow.
- What happens to their shadow when they jump into the air?
- Can your child make his or her shadow bigger or smaller?

More To Explore:

- Make shadow puppets indoors with a pencil, card stock or stiff paper, scissors, popsicle stick, tape, and a flashlight.
- Draw your favorite animal, object, or shape and cut out carefully.
- Tape the puppet to the popsicle stick and turn off the room lights.
- Turn on the flashlight and hold the puppet in front of a wall.
- Can you make your puppet's shadow jump? What do you notice when you move the puppet closer to the wall? Farther away?



Books To Read Together:

Moonbear's Shadow by Frank Asch

Let's Make Rabbits by Leo Lionni

Oscar and the Moth: A Book About Light And Dark by Geoff Waring

The Black Rabbit by Philippa Leather

Me and My Shadow by Arthur Dorros

My Shadow by Robert Louis Stevenson

Light and Dark by Chris Oxade



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