



## EXPLORING EARTH

# Bear's Shadow

---

### Try this!



Let's pretend the flashlight is the Sun and use it to learn about shadows! Shine the Sun onto the toy bear. Where is Bear's shadow?



Try moving the light. What happens to Bear's shadow as the Sun moves?



In *Moonbear's Shadow*, Bear discovers his shadow and has many other adventures. Choose a challenge card and try new things with Sun and Bear!

*A shadow is created when an object blocks light from falling on a surface.*

**An object's shadow always appears on the side opposite the light source.** In this activity, Bear's shadow appears on the mat when light from the flashlight is blocked by the toy bear. No matter what he does, Bear is always between the Sun and his shadow!

The flashlight in this activity is a model for how the Sun casts shadows on Earth. On a sunny day, you can block sunlight and cast a shadow on the ground, a wall, or another surface. Your shadow always falls on the side opposite from the Sun, just like Bear's. If the Sun is behind you, your shadow will be in front of you.



**To make a shadow, you need a source of light, an object to block the light, and a surface for the shadow to fall upon.**

**When the light source or the object moves, the shadow changes.** If you hold the flashlight down low, close to the table, Bear's shadow gets very long. If you move the light high over Bear's head, his shadow gets shorter.



**Shadows are longer in the early morning and late evening, when the Sun is low on the horizon.**

Outside, shadows change throughout the day as the Sun appears to move in an arc across the sky. A tree's shadow is longer at sunrise and sunset, when the Sun appears low in the sky, and shorter at noon when the sun appears high in the sky.