



## **Track the Sun!**

Have you ever watched how shadows move throughout the day? Have you noticed how the sun shines through one window early in the morning and a different window later in the evening? That's because the sun rises in one part of the sky (the east) and sets in the opposite part of the sky (the west). Today we are going to track how the sun's position changes throughout the day.

### **Materials:**

- Object around 12" tall (water bottle, stacked rocks, block tower, or something similar)
- Chalk, or large pieces of paper taped together and a marker
- A flat, open, and sunny spot

### **Try it!**

- Find a flat, open spot where you know there is sun throughout the day. Try to find a spot that does not have shadows from trees or buildings later in the day.
- First thing in the morning, place your object on the ground.
  - If your spot is a hard surface that you can draw on directly with chalk, you are set to go!
  - If you are unable to draw on your surface with chalk, place multiple pieces of paper under your object - large enough to trace the shadows throughout the day. Tape the pieces of paper together so that they stay in place.
- Trace the current shadow of the object and label it with the time of day.
- Check on your object every hour or so, and trace its current shadow. Has it moved?
  - Look up in the sky - is the sun in a different spot (remember not to look directly at the sun)
- Continue this process throughout the day until the sun sets.
- Observe your tracings, how far has the shadow moved throughout the day?

### **Guiding Questions:**

- Which way did the shadows move?
- Look at your current shadow - where do you think the sun is right now?
- Look at your shadow tracings. Where is the largest shadow? Where is the smallest shadow?

### **Learning Behind the Play:**

- Supports science skills such as observation, prediction and experimentation.
- Develops math concepts through spatial awareness, and size and shape identification.
- Reinforces the development of fine motor skills through drawing and tracing.

**Take It Further:**

Try this experiment in your home with an object and a flashlight. Move your flashlight around your object - how does it change the shadow? What happens when you move your flashlight closer? Further away?