



## Challenge: THE DOG DAYS OF SUMMER

**The Scoop:** A sure sign that summer is here is that the days seem to get longer and longer – more time for fun in the sun! But what’s really going on – how can a day really be longer? In this challenge, you’ll track the position of the sun for several days or weeks, using the sunrise or sunset as a guide as you explore how days are determined by the sun’s altitude in our sky.

### **What You’ll Need:**

- Clock or watch
- Paper and a pen or pencil
- Camera (optional)

**The Challenge:** You can choose to monitor the sunrise, the sunset or both. But to catch the sunrise, you’ll have to get up very early in the morning!

1. Pick a specific location outside from which you can clearly see the sunrise (facing East) or sunset (facing West). You may need to stand at different places to see the sun in the morning and evening.
2. Find a few landmarks you can use to frame your view of the sun in the sky, like a building, a tree or a fence.
3. Then, one day each week, at the exact same time each day, go outside, stand at the exact same point and look at the position of the sun. For sunrise, you’ll need to be outside sometime between 5am and 6am, for sunset, between 7:30pm and 8:30pm. Write down the position of the sun, using the landmarks you’ve chosen. For example, “halfway between the oak tree and the neighbor’s roof.”
4. Draw a picture or take a photo of the sun’s position.
5. Repeat this one day per week for **4 weeks**; each time, write down the sun’s position as compared to the same landmarks. What do you notice? Does anything change over time?

### **Stuff to Think About:**

- Why do you think the position of the sun in the sky at a certain time can change? How might this be the same or different in the winter?
- There are some parts of the world that have about 20 hours of daylight in the summer and 20 hours of darkness in the winter. Why do you think that is? Where do you think those places are on Earth?