

Name \_\_\_\_\_

## Shadow Spy Field Report

**Mission Objective:** Track and analyze the **length** and **direction** of shadows throughout the day based on Sun's position in the sky. Then, use your findings to explain how this connects to **Earth's rotation**.

**Part 1: Shadow Simulation Table** (Use a pencil, stick, or tall object as your "Shadow Marker")

Imagine you're tracking your shadow at 3 key times on a clear day. Use this chart to **predict** or **analyze** how shadows change.

Time of Day	Length of Shadow (Short/Medium/Long)	Direction of Shadow (N, S, E, W)

### Part 2: Analyze Your Findings

Answer the questions below in complete sentences.

1. At what time was your shadow **shortest**, and why?
2. In the morning and afternoon, your shadow points in different directions. Why does the direction change throughout the day?
3. How does Earth's **rotation** explain the changes in your shadow?

**Bonus Challenge:** Draw a **top-down sketch** of your "Shadow Marker" and label where the Sun would be at 9:00 AM, 12:00 PM, and 3:00 PM. Show where the shadow would point at each time.

