

Star Clock

Procedure

1. Use the chart below to record your data.

Position of Big Dipper	March	June	Sept.	Dec.
Left				
Top				
Right				
Bottom				

2. Cut out the Star Clock base and the Star Clock wheel. Place the wheel on top of the base. Attach the two parts by pushing a paper fastener through the center of each. **Safety:** Be careful. The paper fastener is sharp.
3. **Collaborate** Work with a partner. Discuss the times given on the base of the clock. Note how this is different from a time clock.
4. **Use Models** Turn the wheel so that the Big Dipper is at the left. Find March and read and record the time for mid-March. That is the time when the Big Dipper will be in that position in the sky.
5. **Record Data** Turn the wheel so the Big Dipper is at the top, to the right, and then to the bottom. For each position, read and record the times for mid-March.
6. Follow steps 4 and 5 to complete your chart for the other three months.

Conclusion

Write the answers to the questions below.

1. **Observe** How does the position of the North Star change during the night?

2. **Infer** How could people use the pattern of the Big Dipper's movement to tell time?

Investigate More!

Design an Experiment Use your star chart at home with an adult family member. Find the Big Dipper and North Star. Use your star clock to find the time.