

# Star Search!

## Procedure

- 1. Use Numbers** Refer to the table on page D75 of your book. Using a scale of 1 cm equals 10 light-years, compute the scale distances in cm to each of the stars in the Big Dipper, a star group that is part of a constellation. Record your values in the chart below.

Star	Actual Distance (Ly) from Earth	Scale Distance (cm)
Alkaid		
Mizar		
Alioth		
Megrez		
Phecda		
Merak		
Dubhe		

- 2. Analyze Data** Look at the photo on page D75 of your book. Use it to mark positions for the stars of the Big Dipper on the black poster board. Connect the dots with the gel pen. Carefully use scissors to poke holes into the poster board at each star location.
- 3. Use Numbers** Cut each of the chenille stems to the correct scale length from your table. Insert each chenille stems into its correct place in the model constellation. Place a bead at the end of each chenille stems.
- 4. Observe** Observe your model from different positions.

## Conclusion

Write the answers to the questions.

1. **Use Models** How did this scale model aid in your understanding of distances to stars in a constellation?

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2. **Synthesize** How might the constellation you modeled look from a different part of the galaxy? Use your model to make a sketch that answers this question.

## Investigate More!

**Design an Experiment** On a clear night, sit facing north and observe the sky. Sketch the brightest stars and organize them into groups. The next day, exchange sketches with a classmate. That night, try to identify your classmate's star groups.